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ONTARIO MINISTRY OF THE ENVIRONMENT
Toronto, Ontario

TORONTO AREA WATERSHED
MANAGEMENT STRATEGY STUDY

HUMBER RIVER AND
TORONTO AREA WATER QUALITY

APPENDIXES K THROUGH N

September 1984

Acres Consulting Services Limited
Niagara Falls, Ontario

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409
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1984

Humber river and Toronto area
water quality : appendixes K
through N.

79629

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APPENDIX K
POLLUTOGRAPHS

APPENDIX K

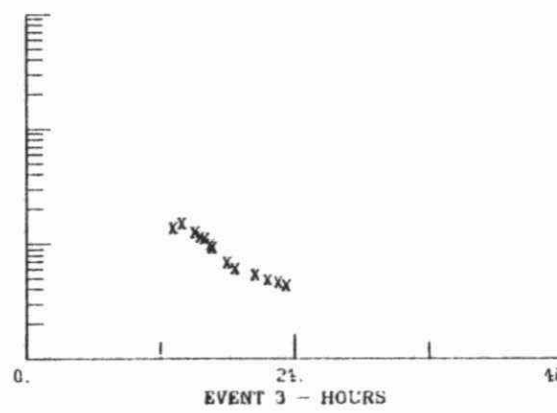
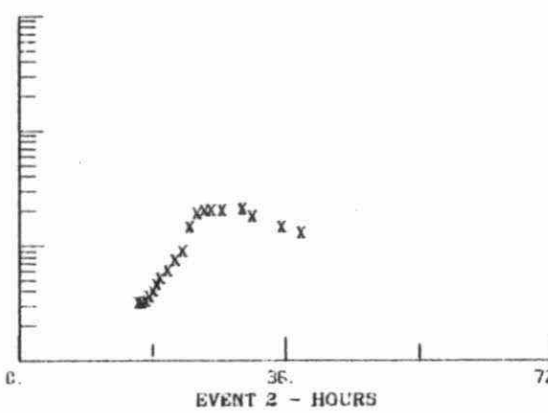
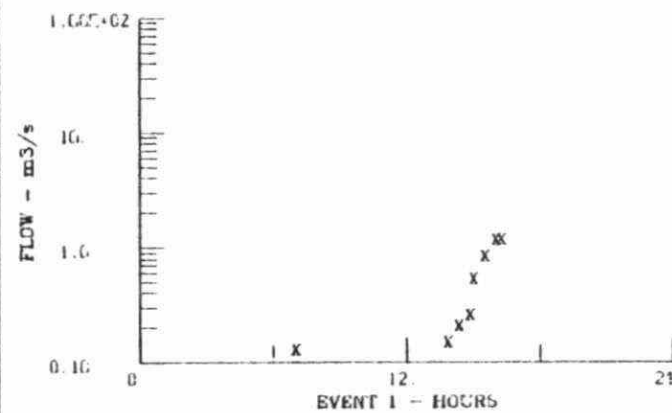
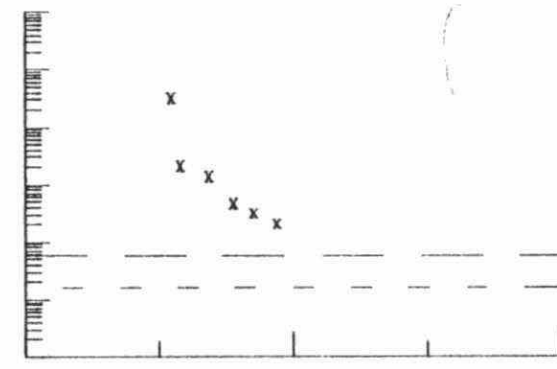
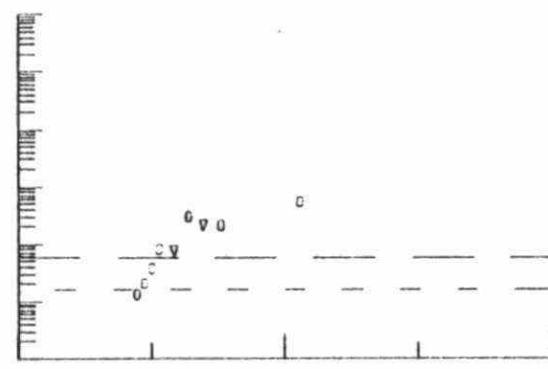
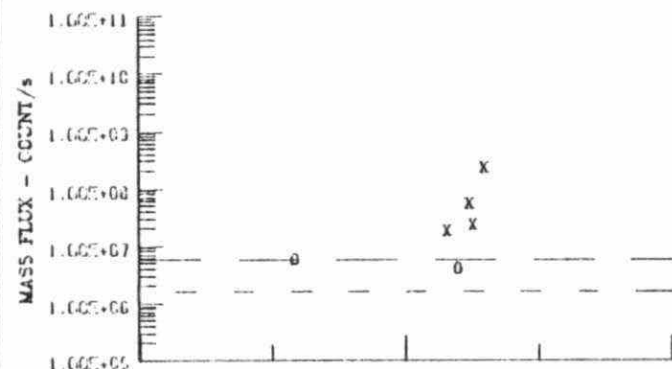
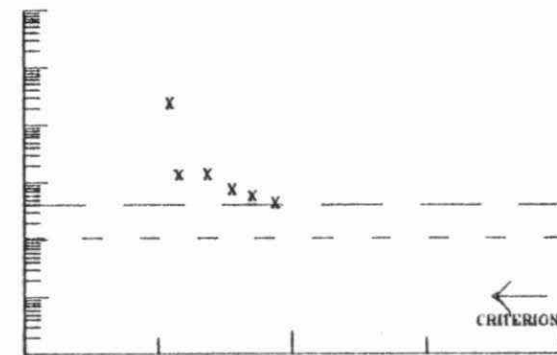
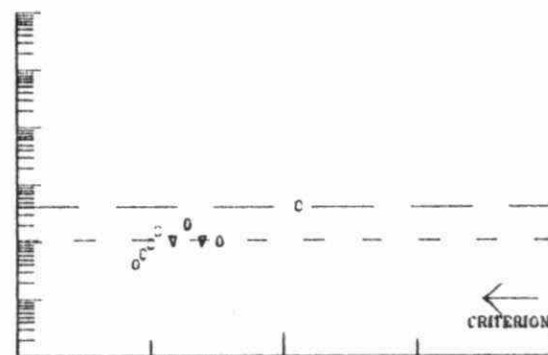
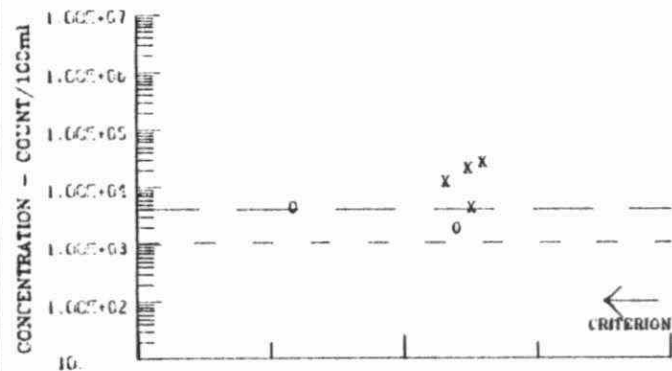
POLLUTOGRAPHS

Appendix K contains pollutographs for the 11 water sampling sites used in the fall, 1982, sampling program. These pollutographs are grouped by parameter in the following order

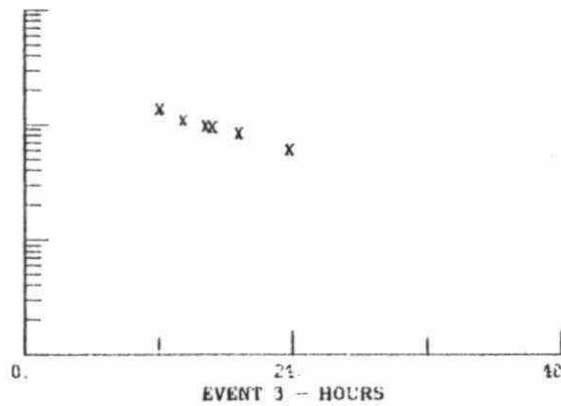
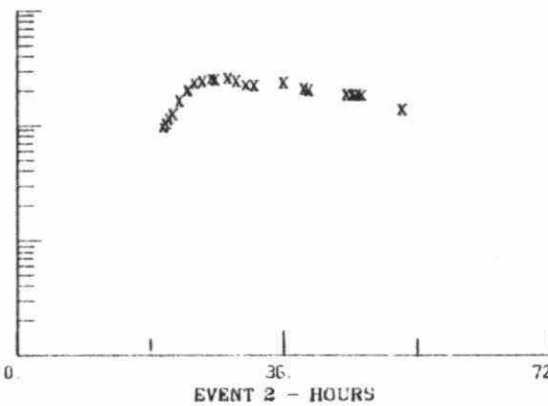
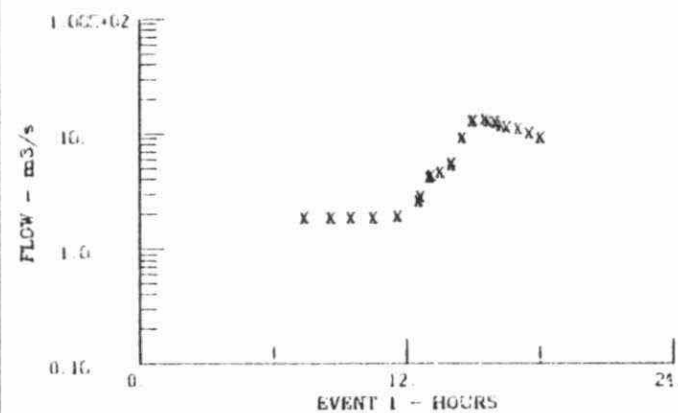
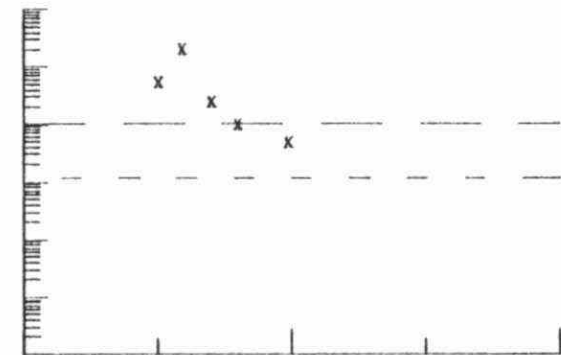
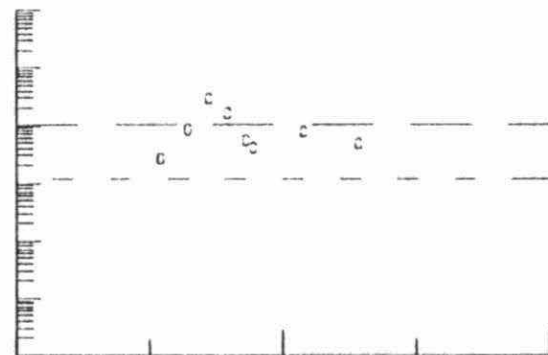
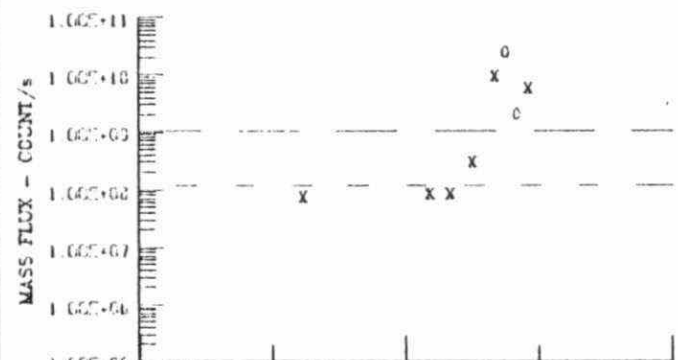
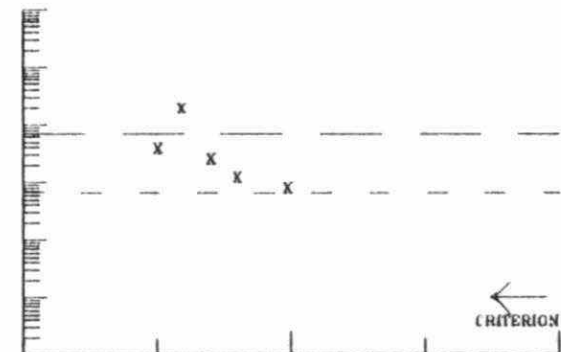
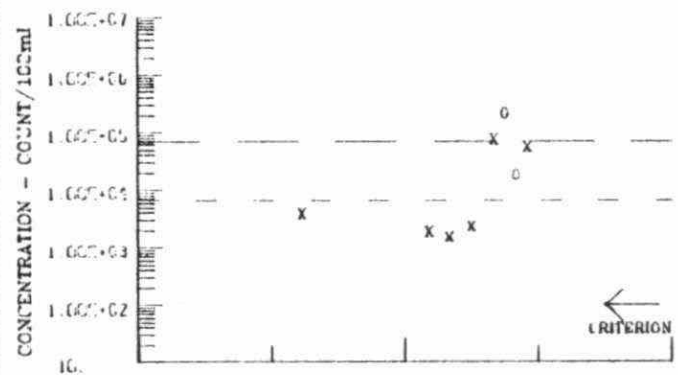
- Fecal Coliform
- Fecal Streptococcus
- BOD₅
- NH₄
- pH
- Phosphates, Filtered Reactive
- Phosphorus, Unfiltered Total
- Residue, Filtrate
- Residue, Particulate
- Cadmium
- Chromium
- Copper
- Mercury
- Nickel
- Lead
- Zinc.

Note that the vertical axis of these pollutographs is in a log-arithmetic scale. This was done to facilitate comparison of vastly different concentrations for different parameters.

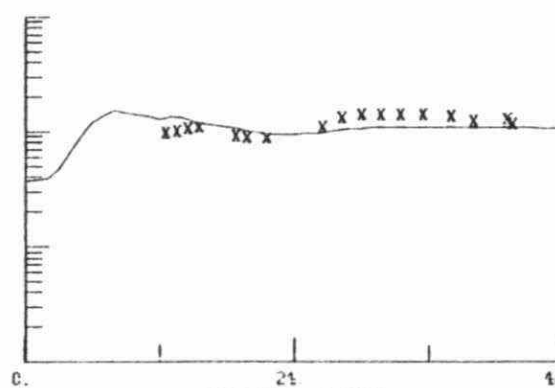
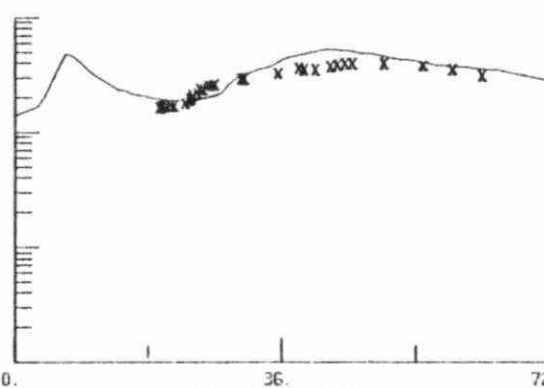
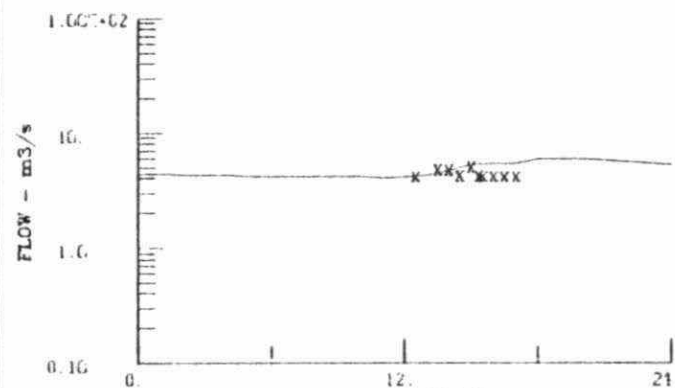
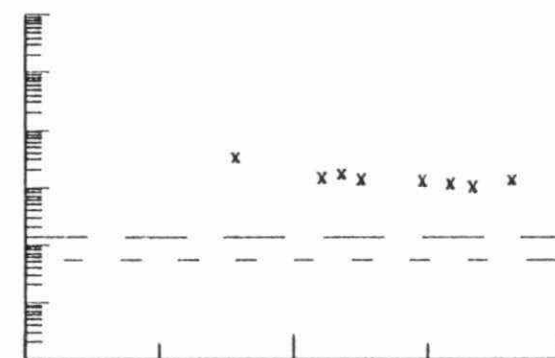
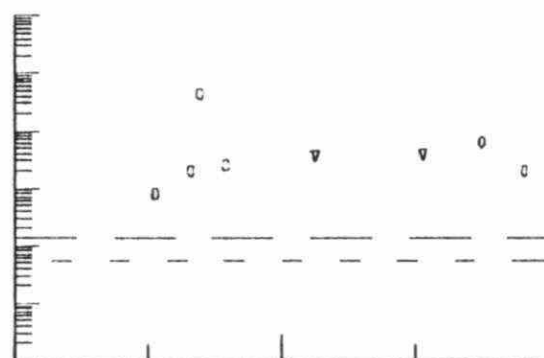
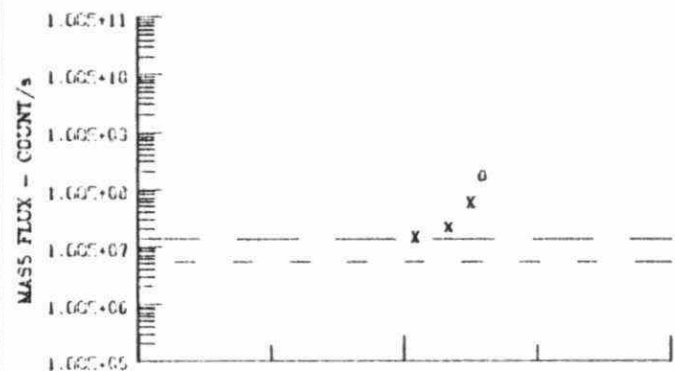
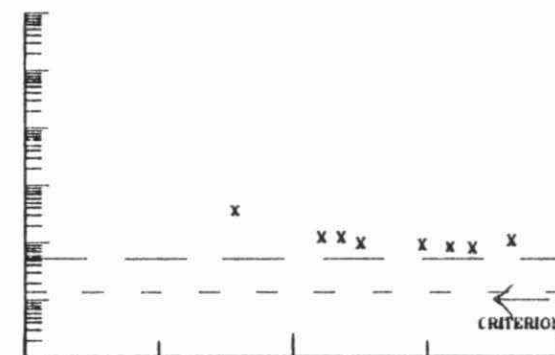
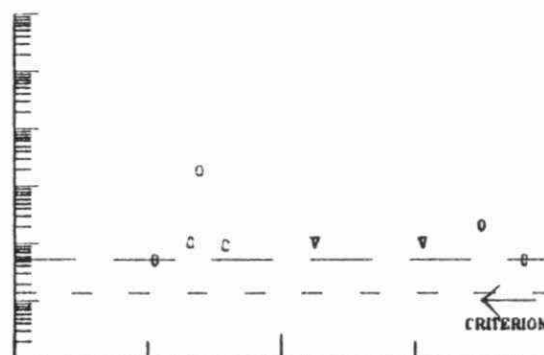
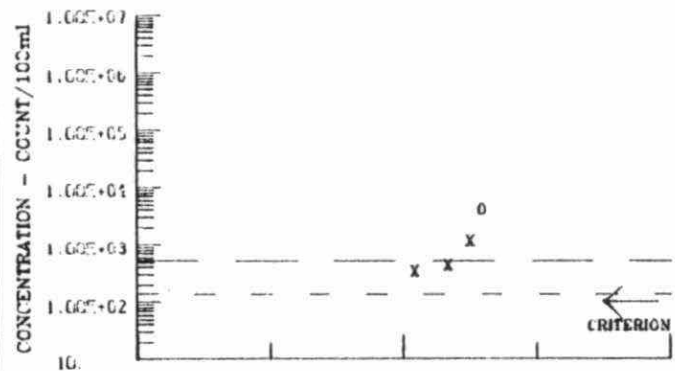
FECAL COLIFORM



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - FECAL COLIFORM



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - FECAL COLIFORM

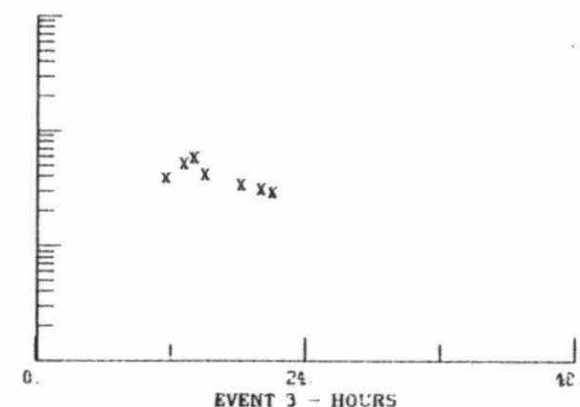
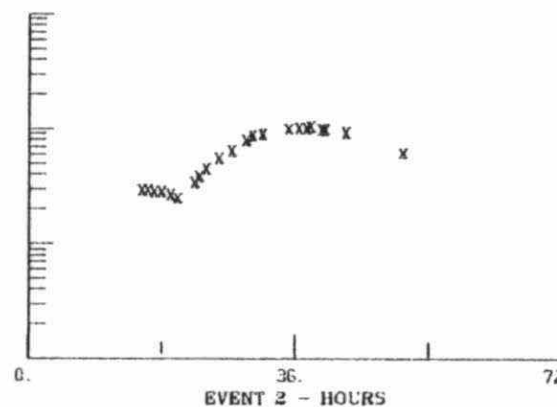
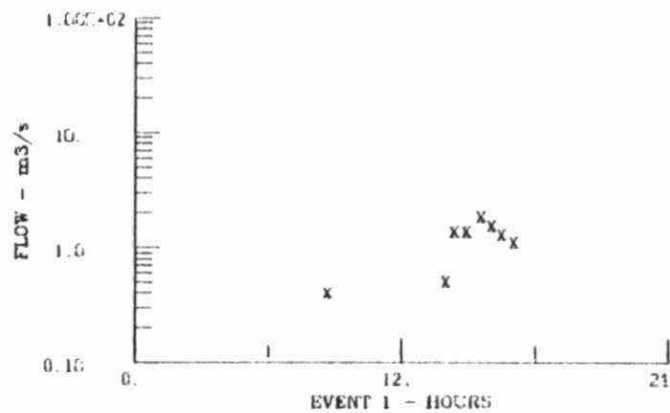
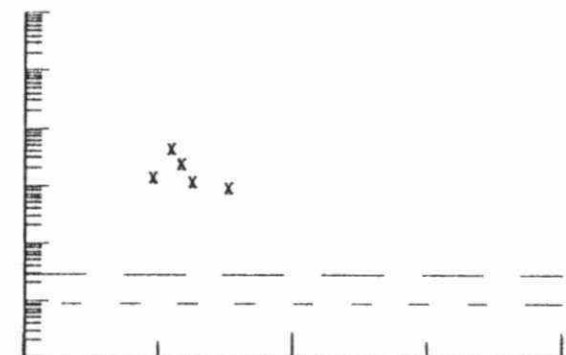
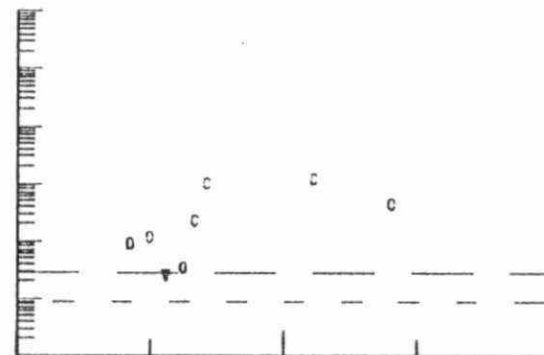
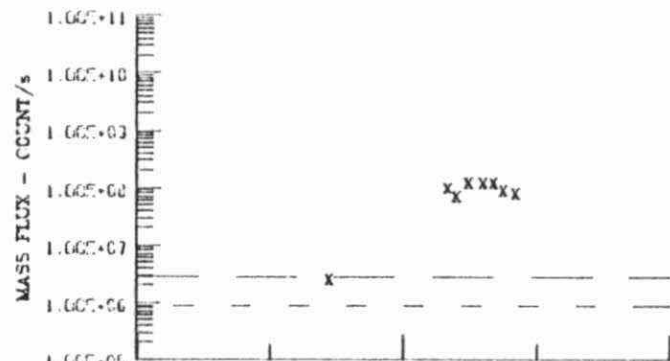
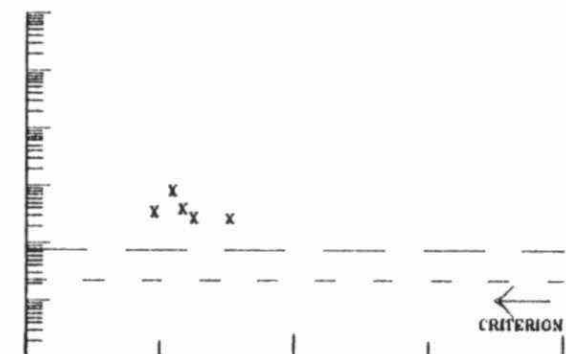
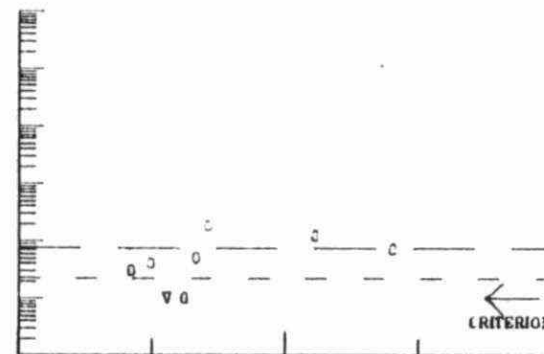
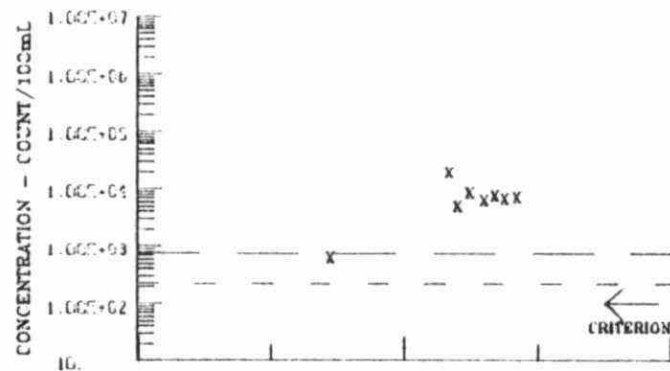


EVENT 1 - HOURS

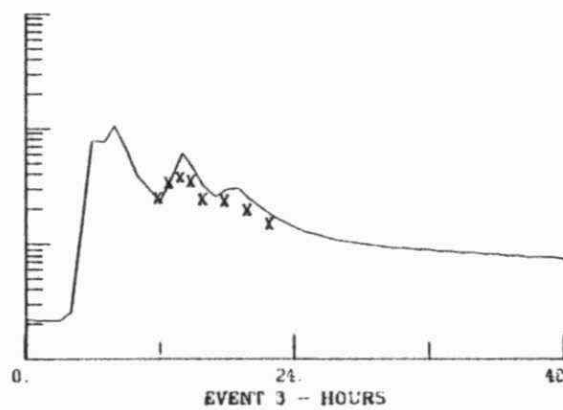
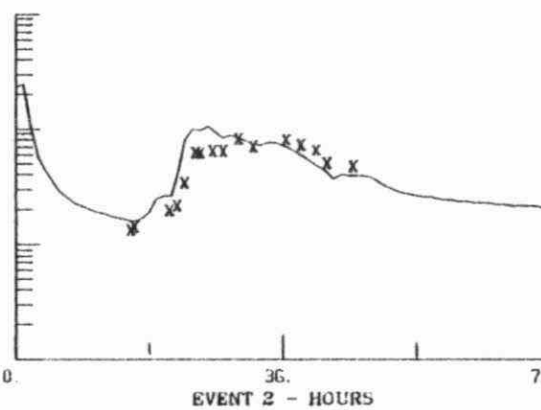
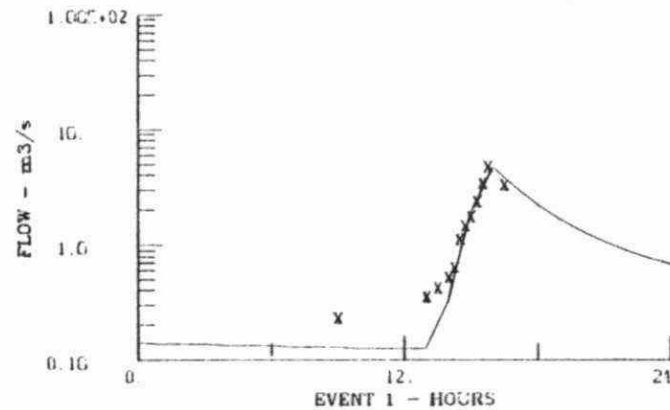
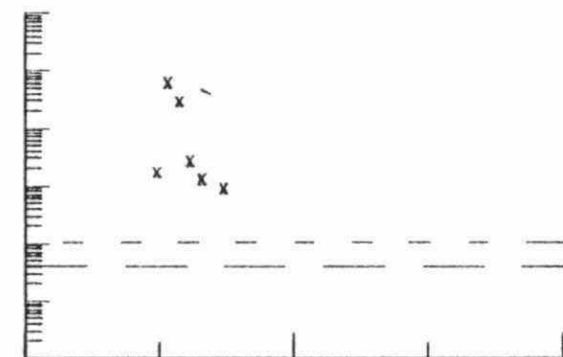
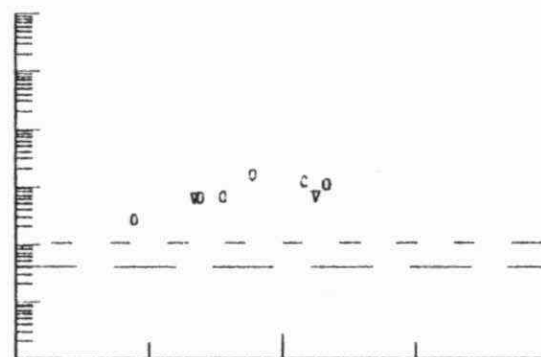
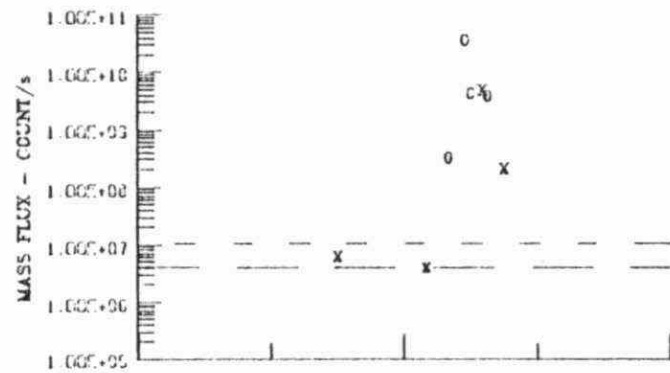
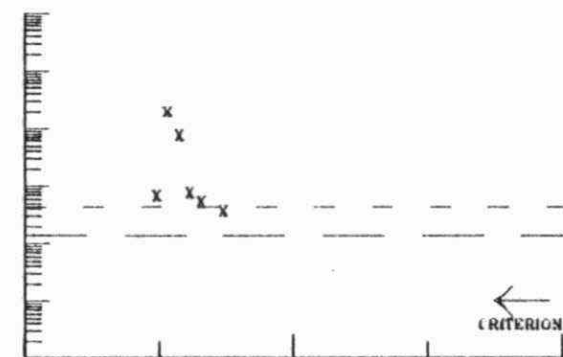
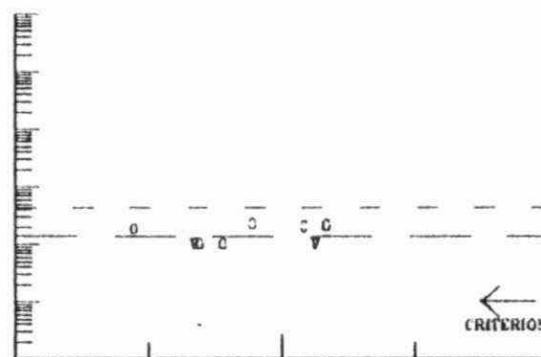
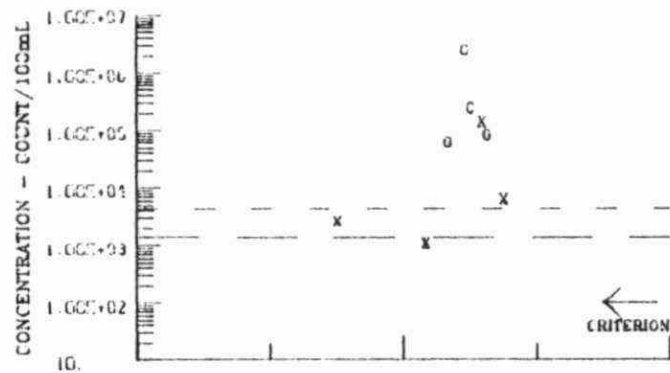
EVENT 2 - HOURS

EVENT 3 - HOURS

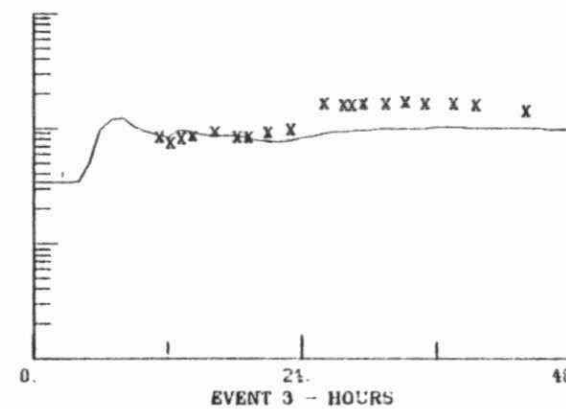
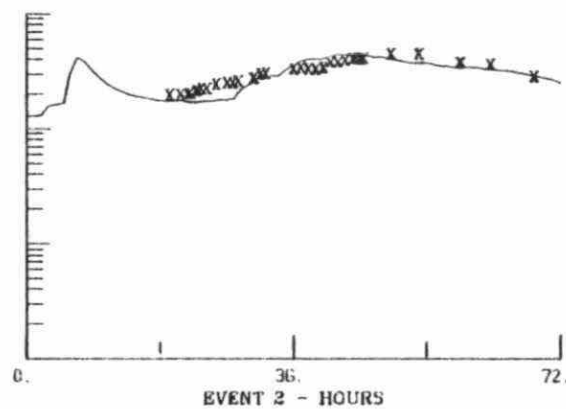
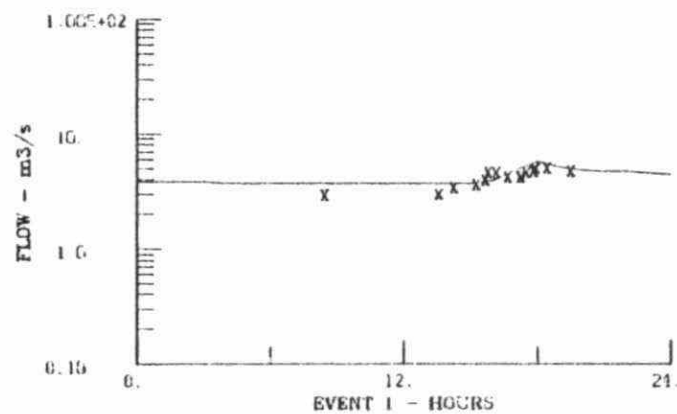
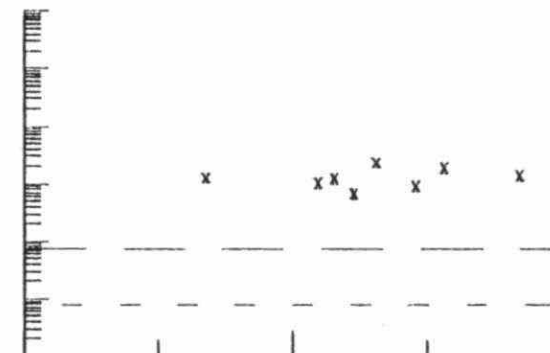
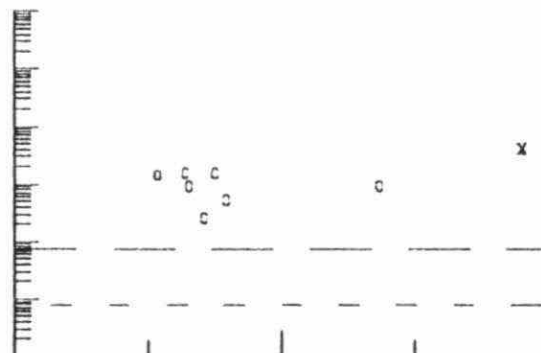
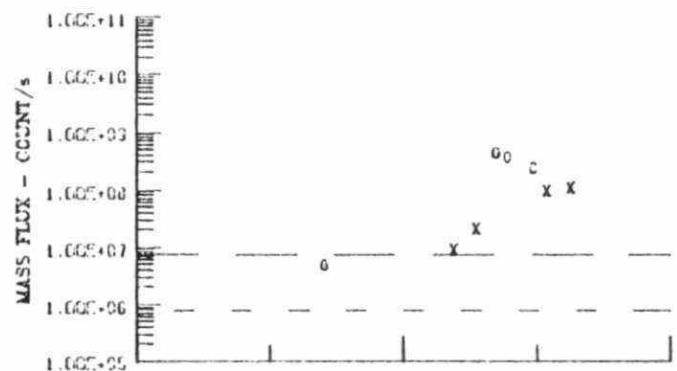
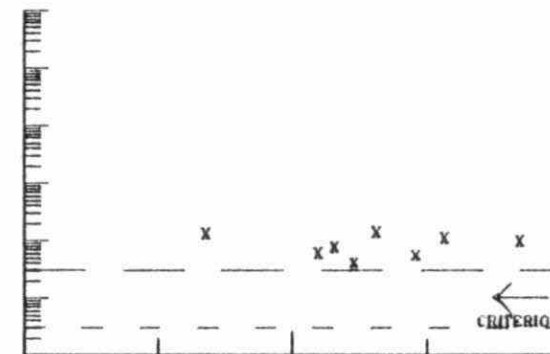
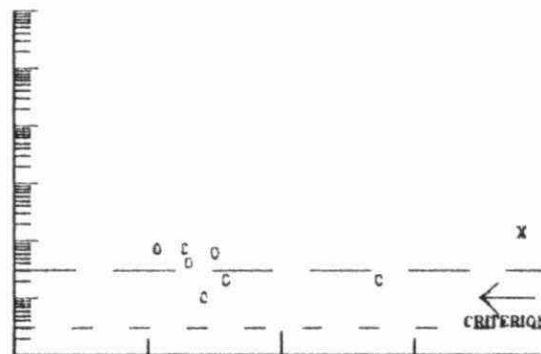
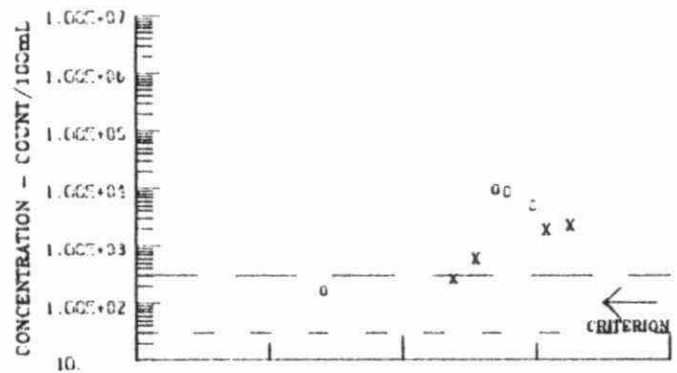
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - FECAL COLIFORM



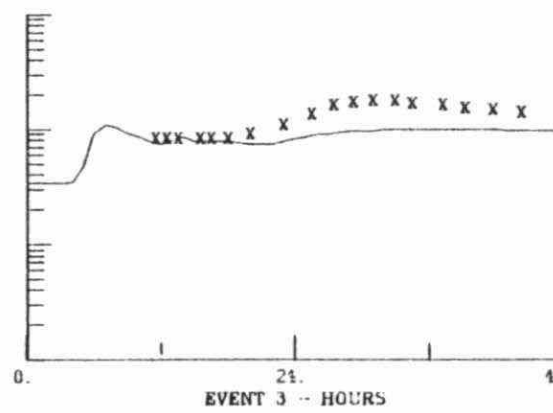
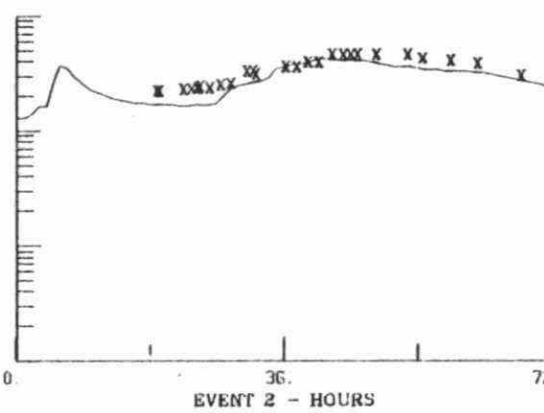
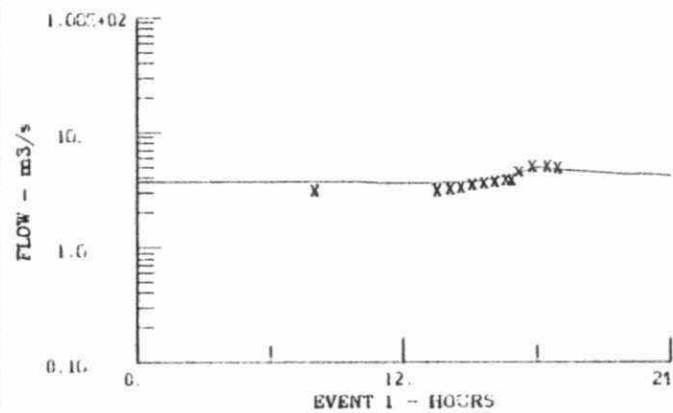
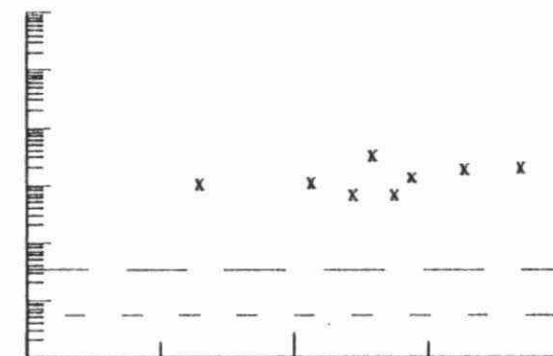
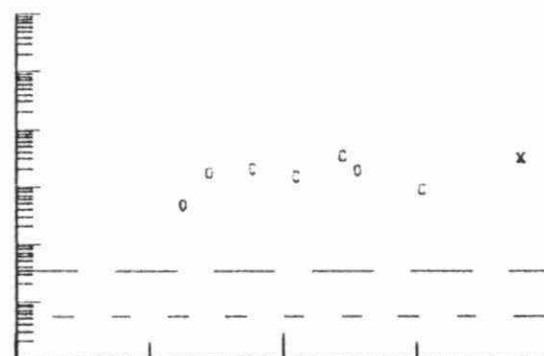
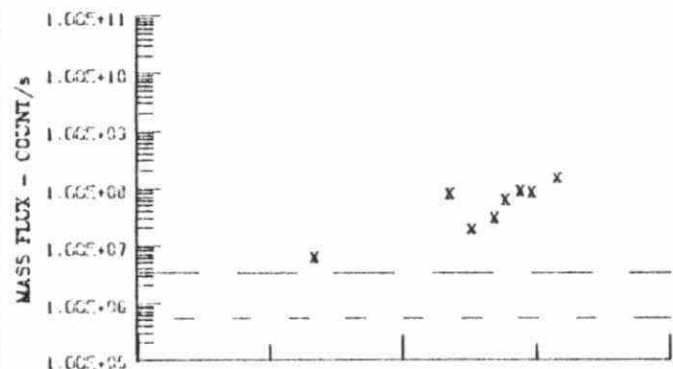
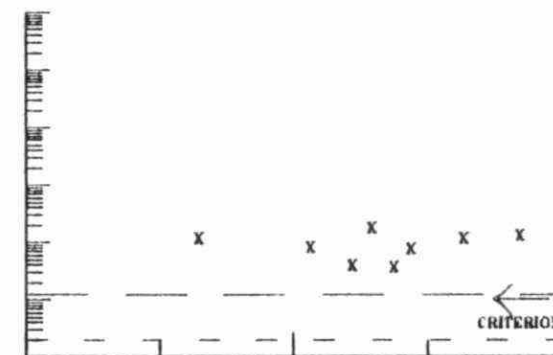
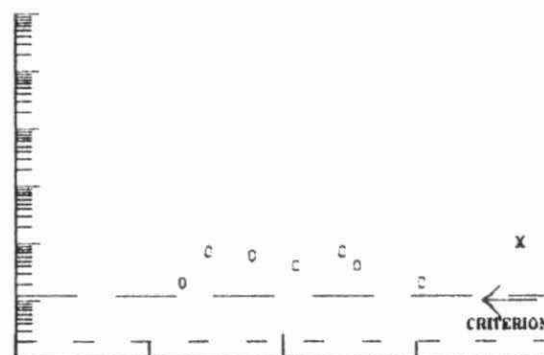
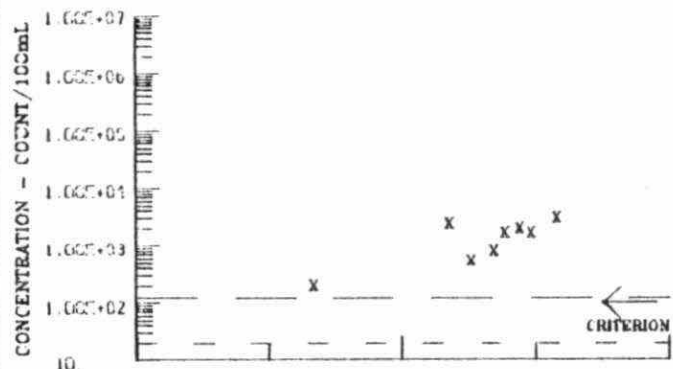
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - FECAL COLIFORM



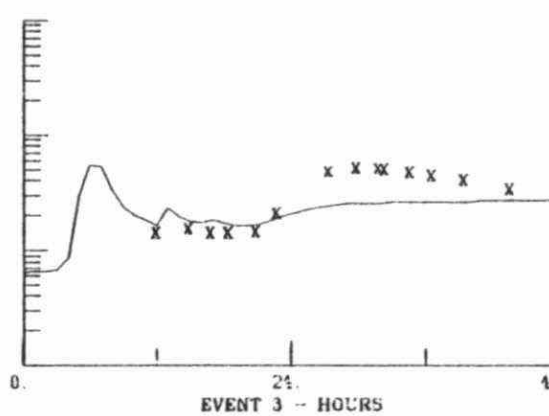
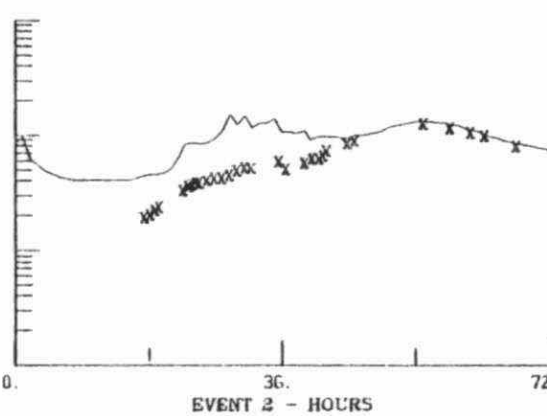
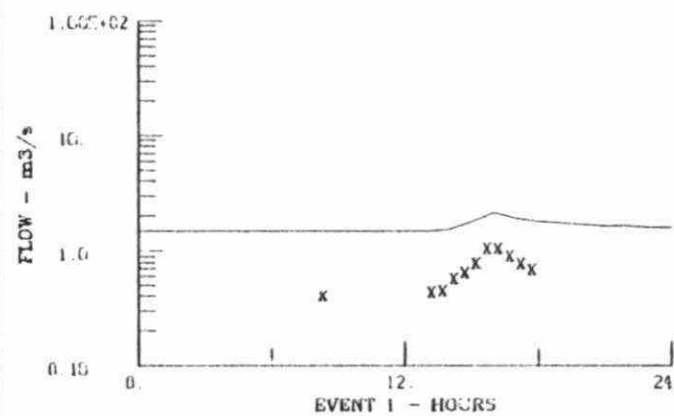
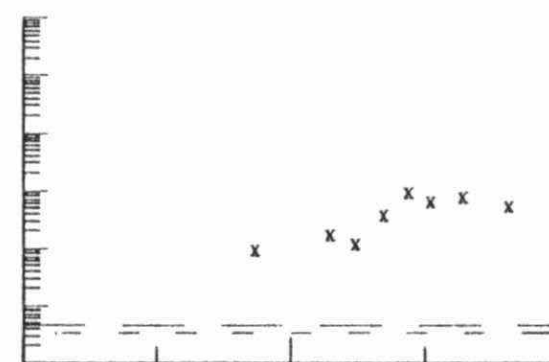
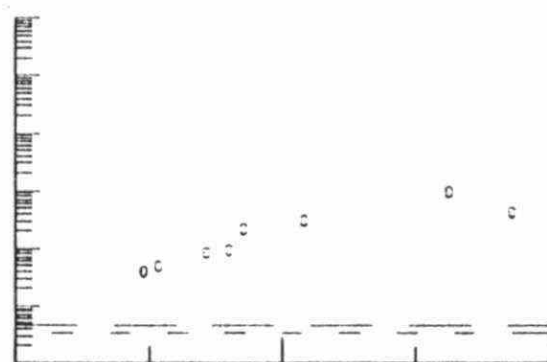
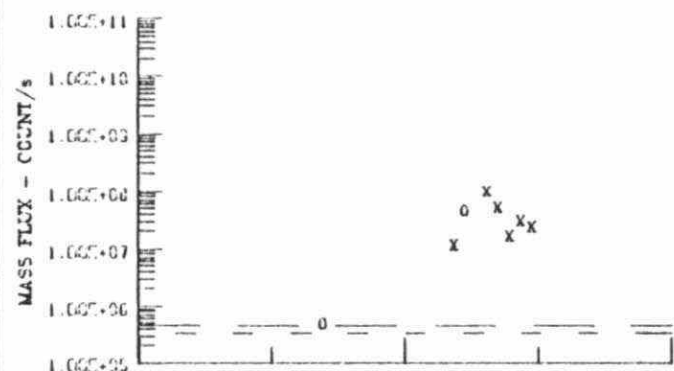
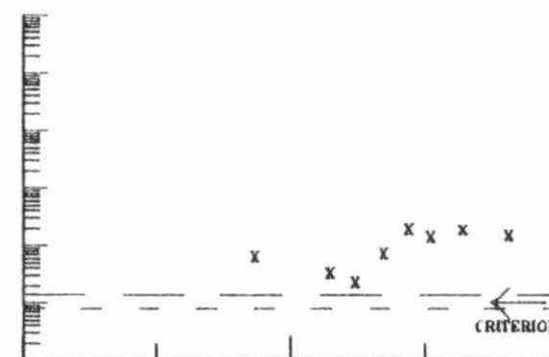
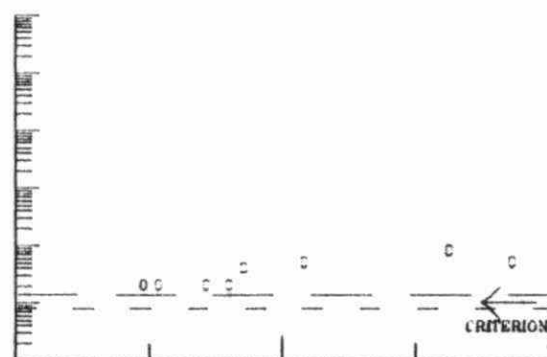
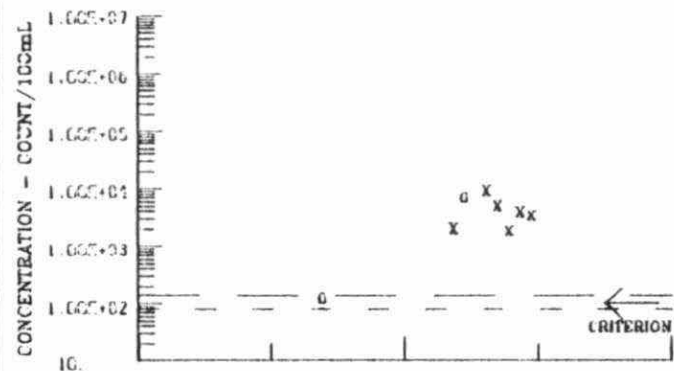
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 -- FECAL COLIFORM



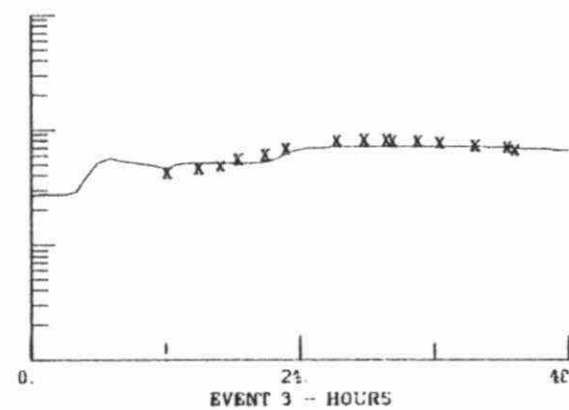
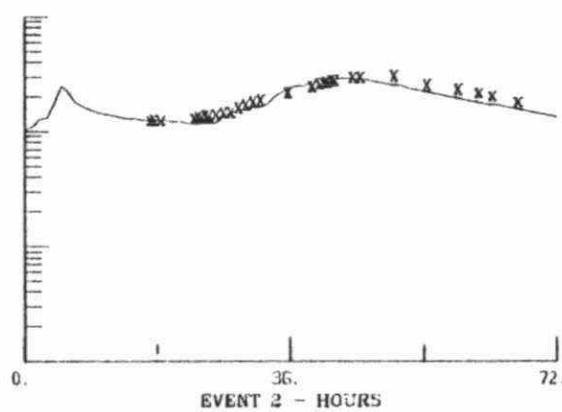
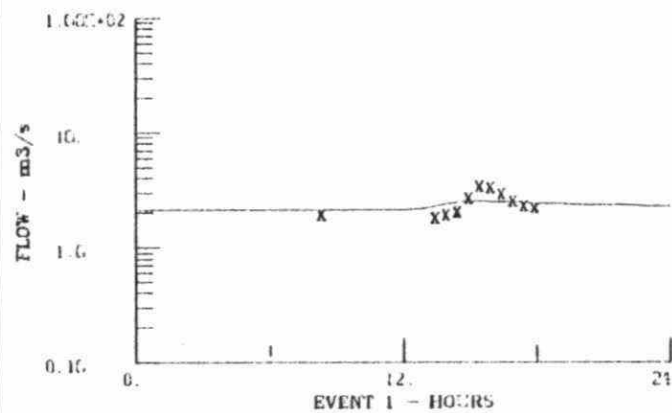
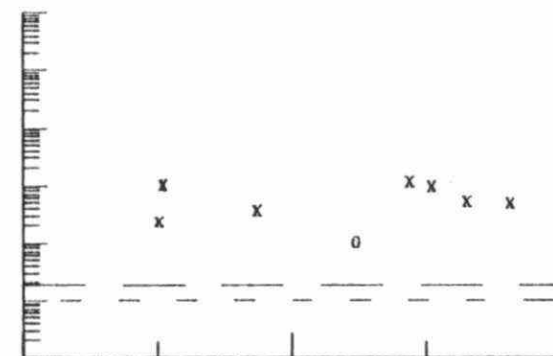
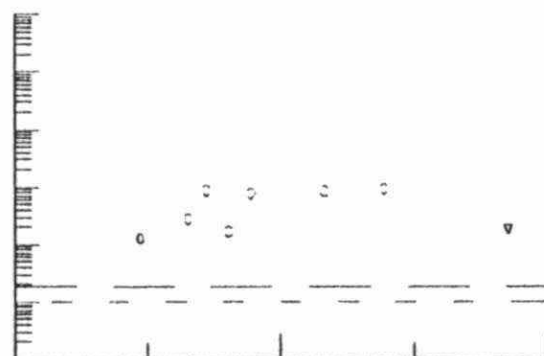
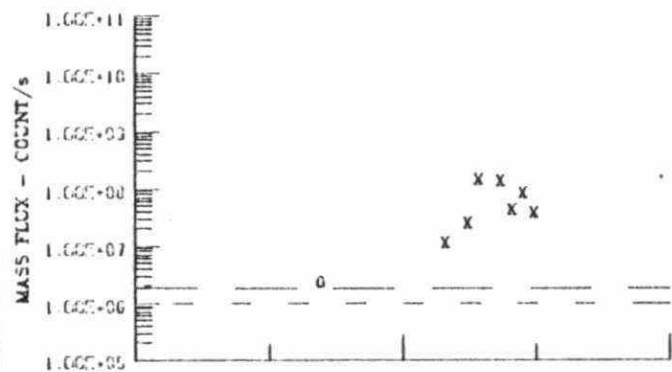
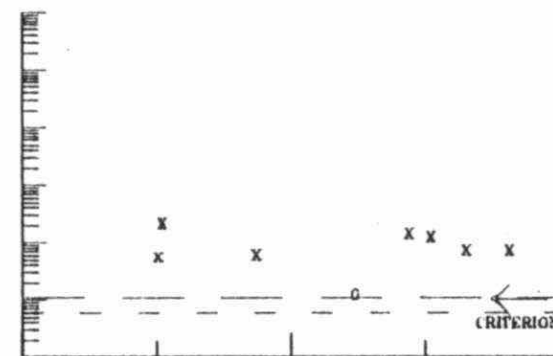
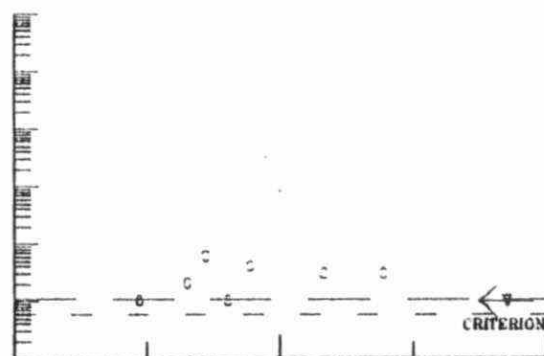
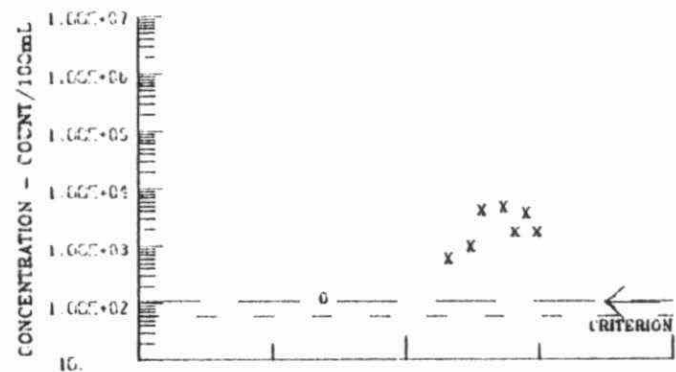
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - FECAL COLIFORM



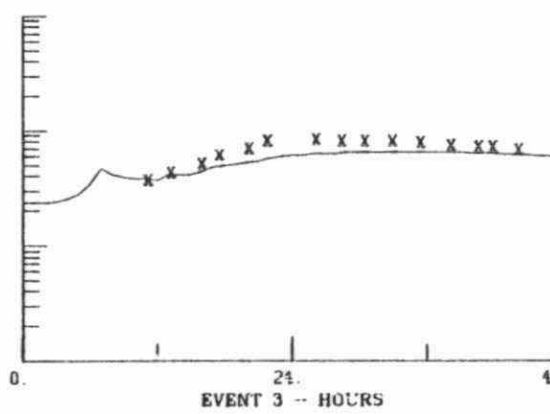
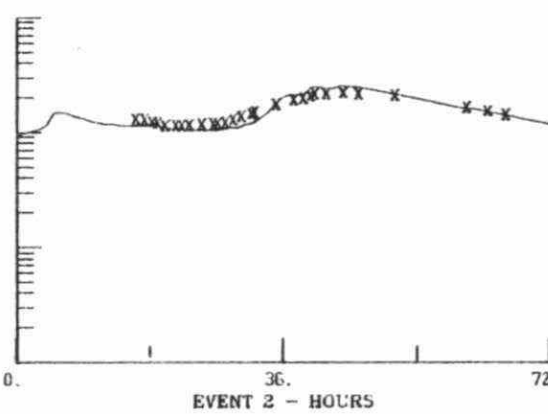
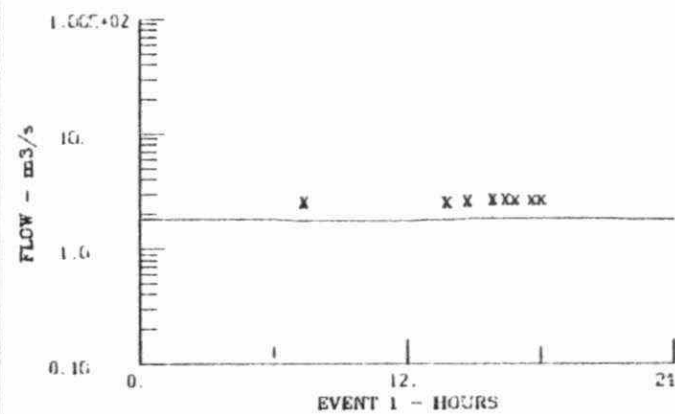
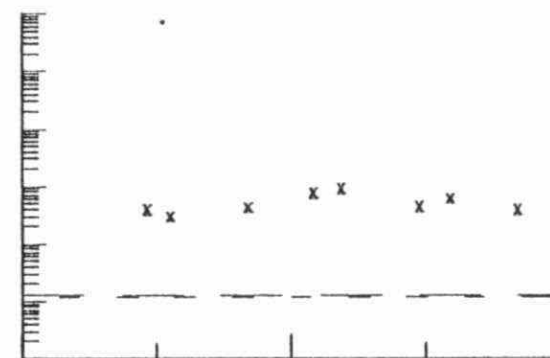
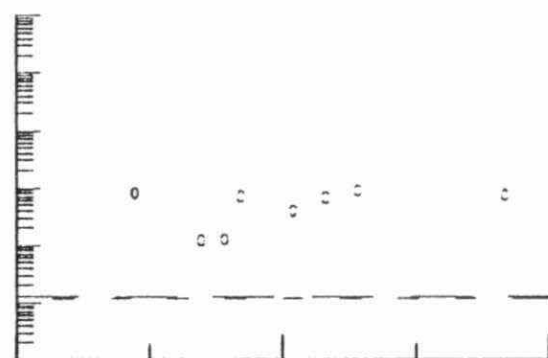
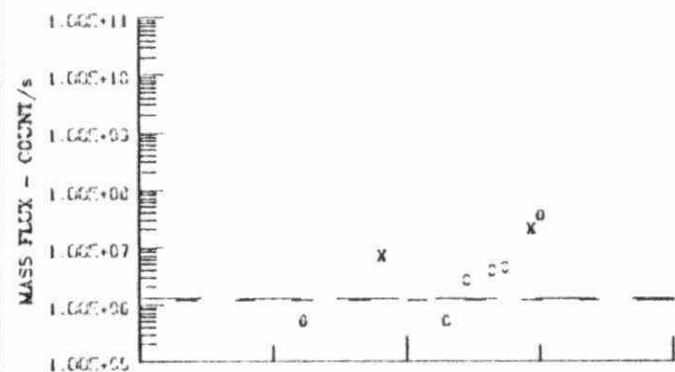
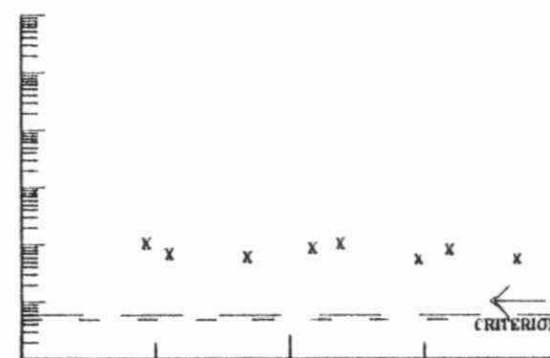
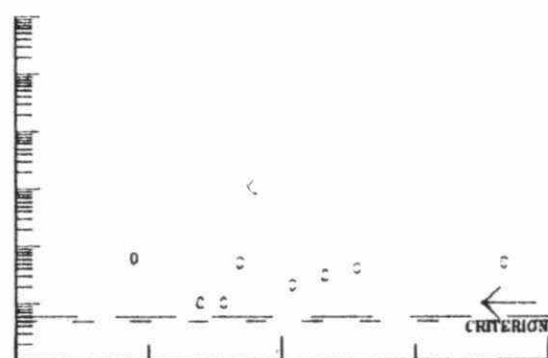
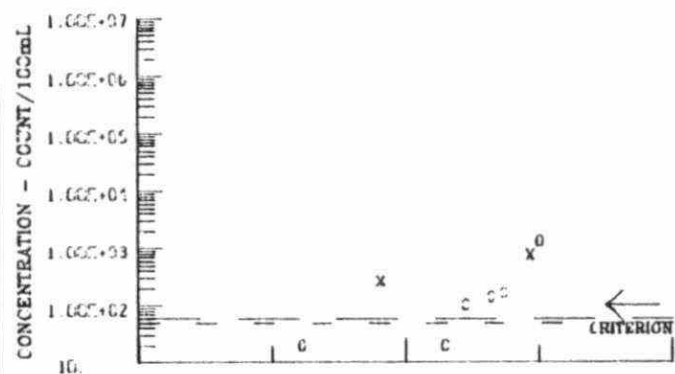
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - FECAL COLIFORM



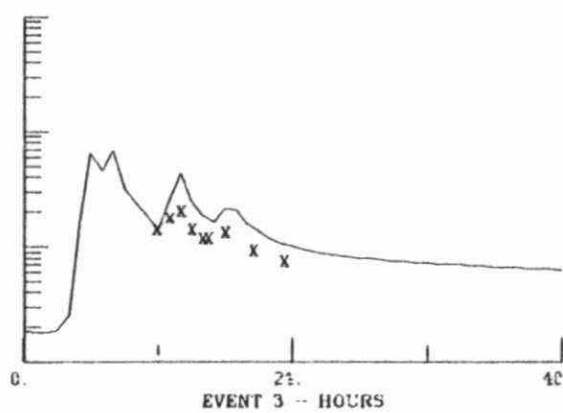
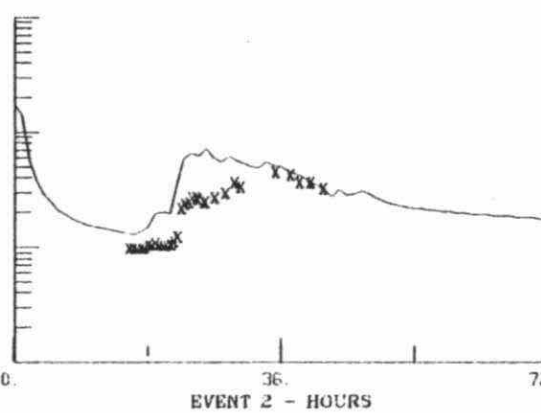
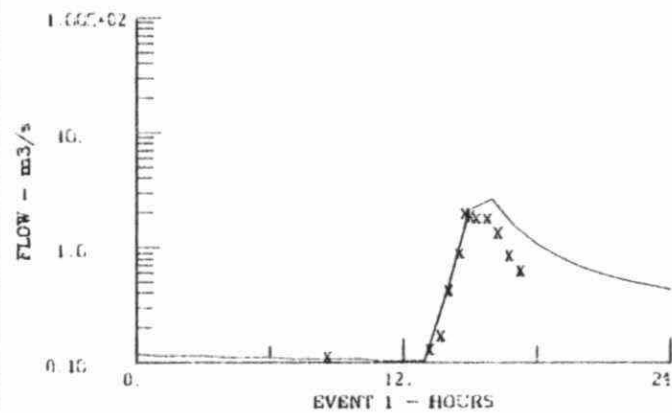
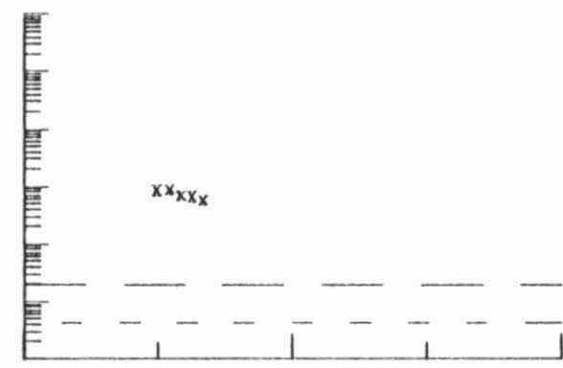
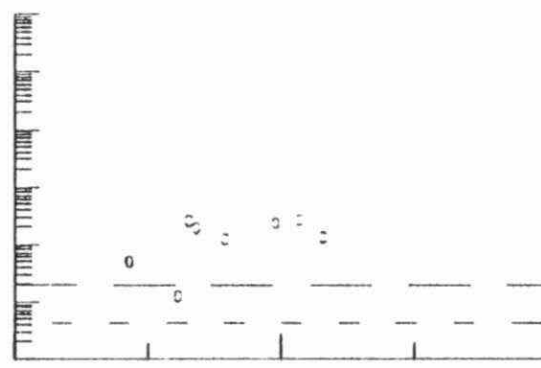
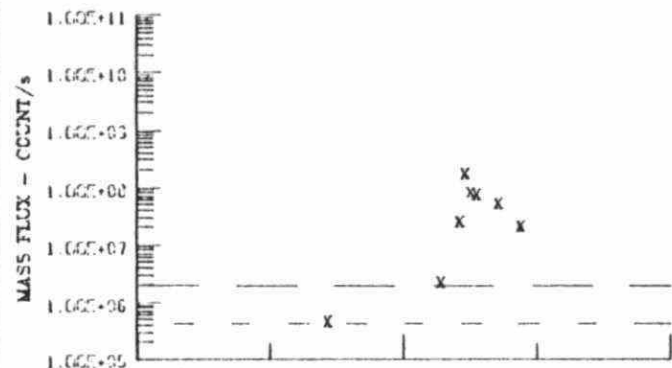
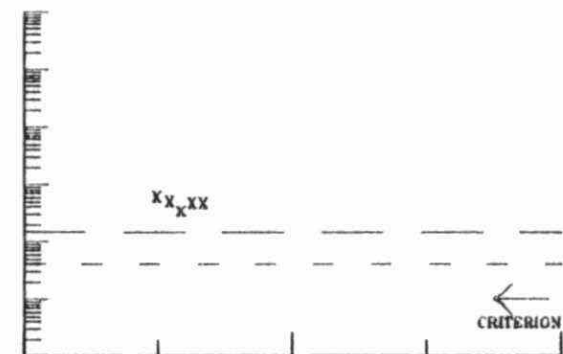
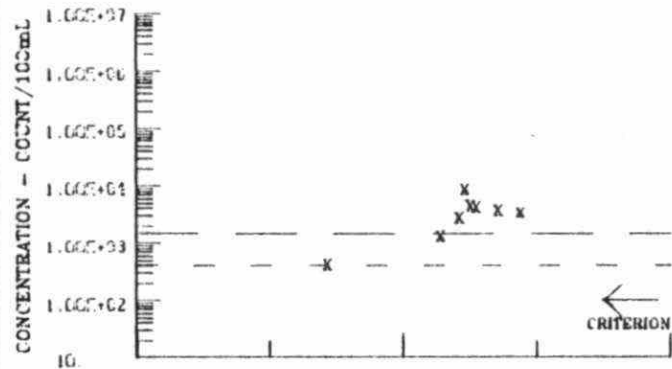
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - FECAL COLIFORM



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - FECAL COLIFORM

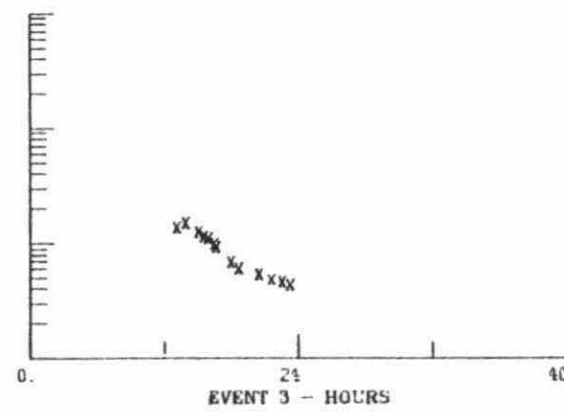
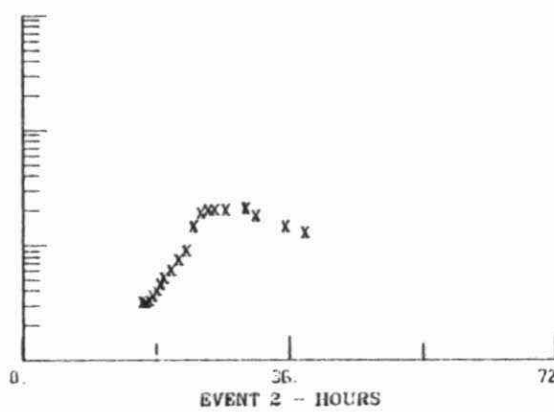
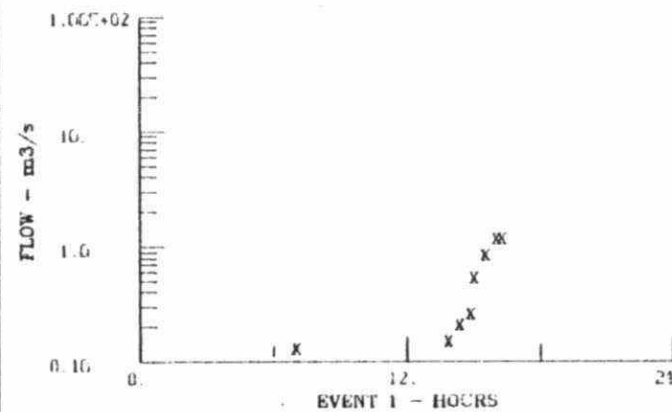
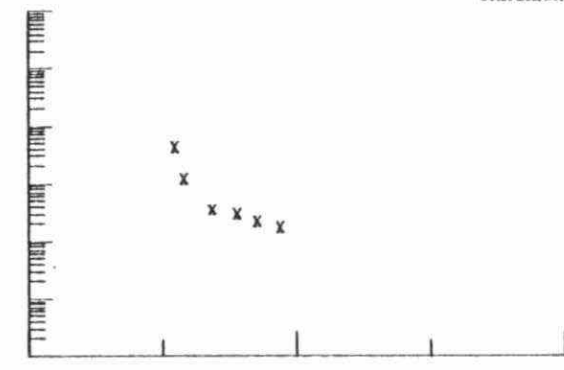
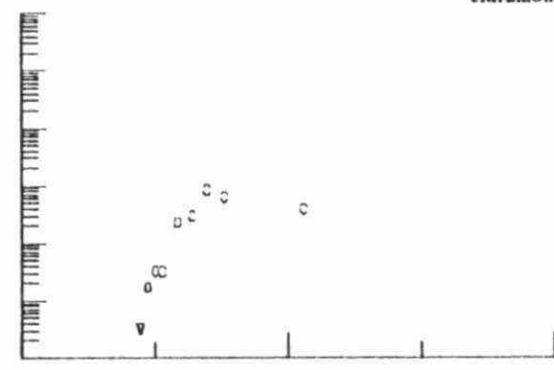
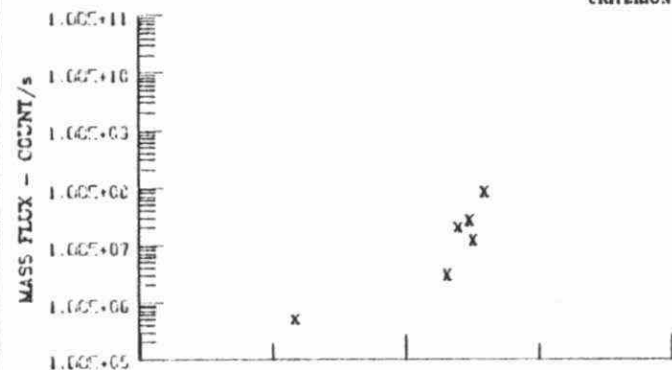
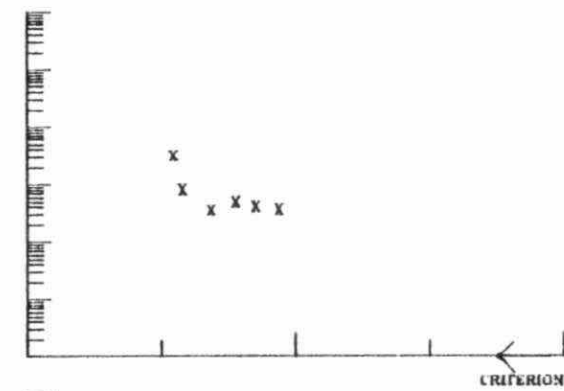
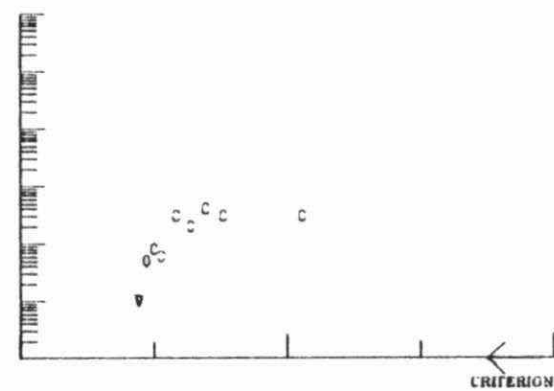
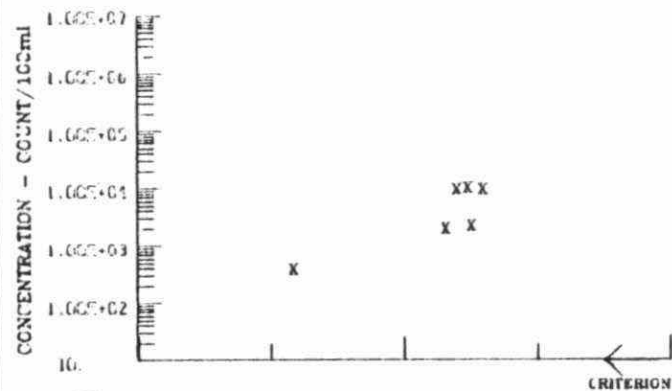


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - FECAL COLIFORM

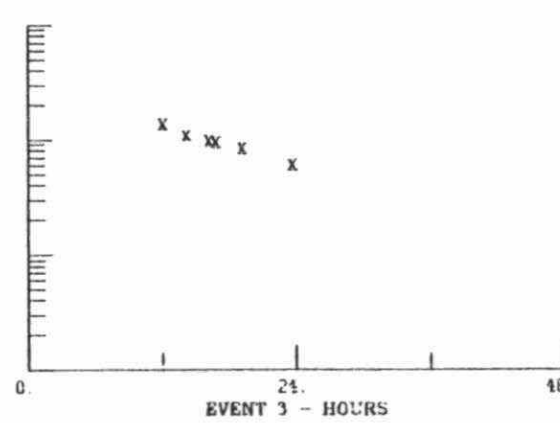
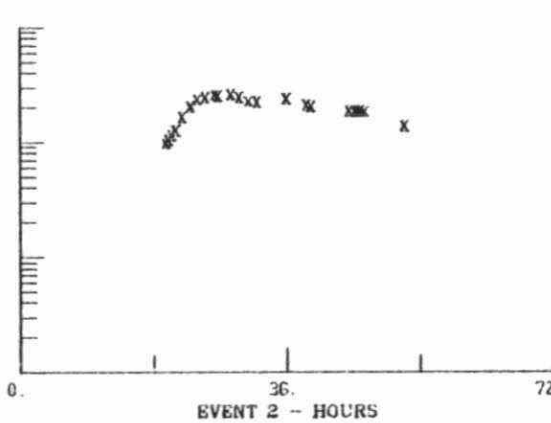
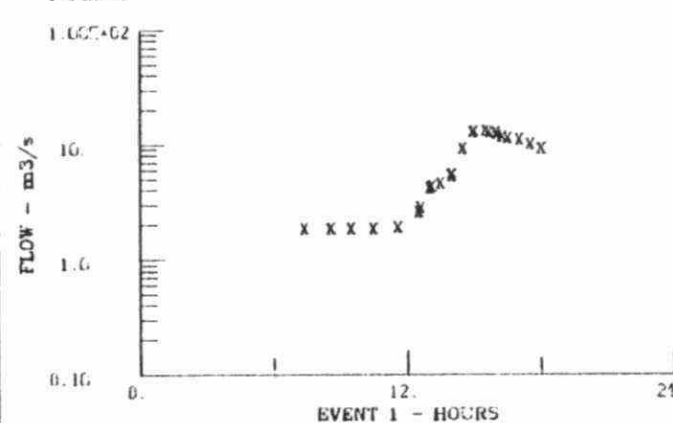
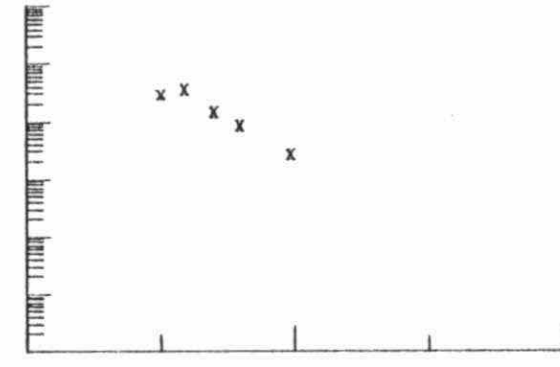
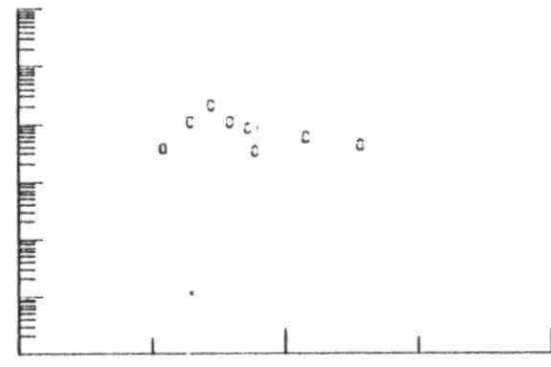
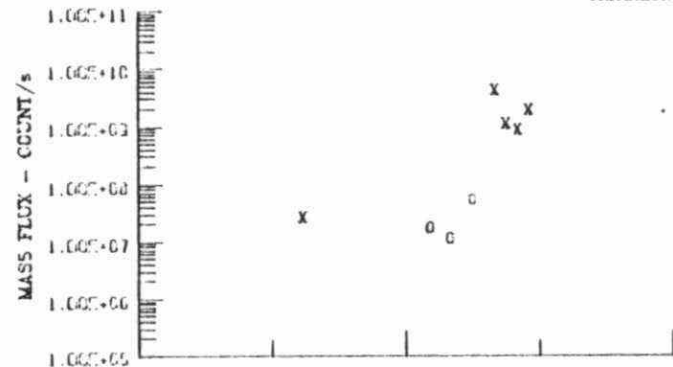
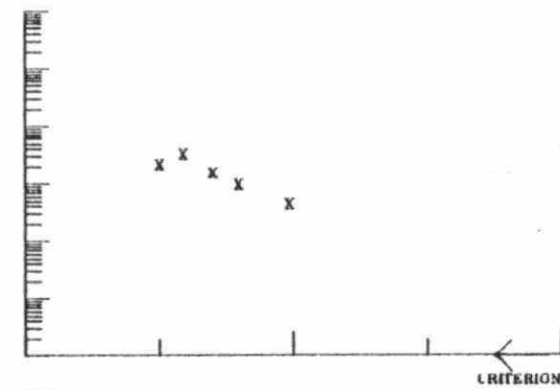
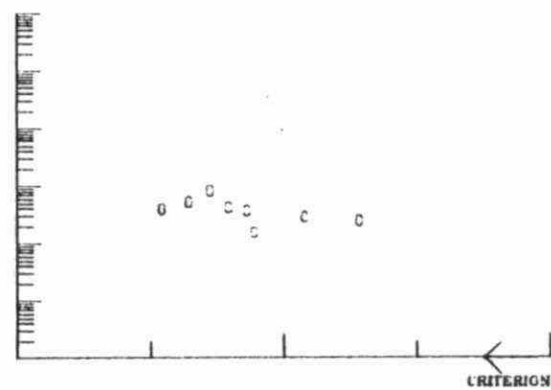
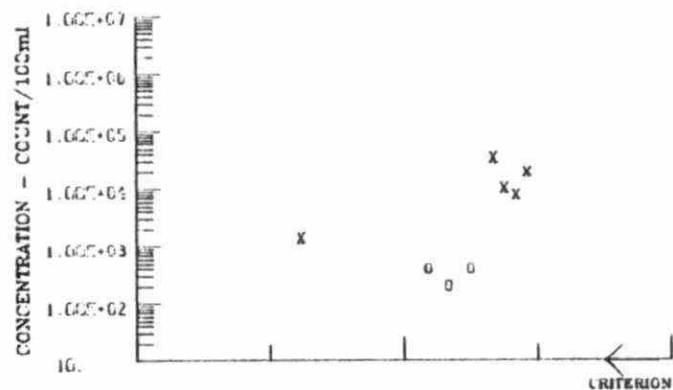


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - FECAL COLIFORM

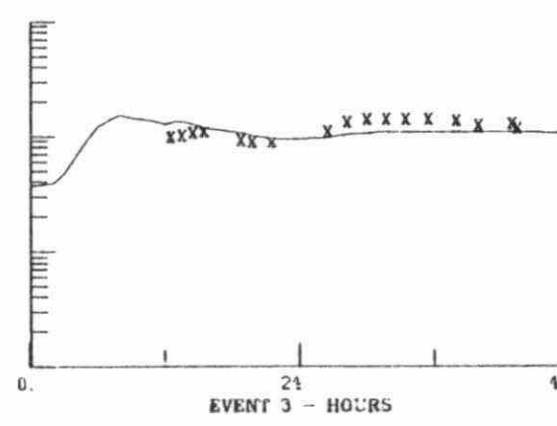
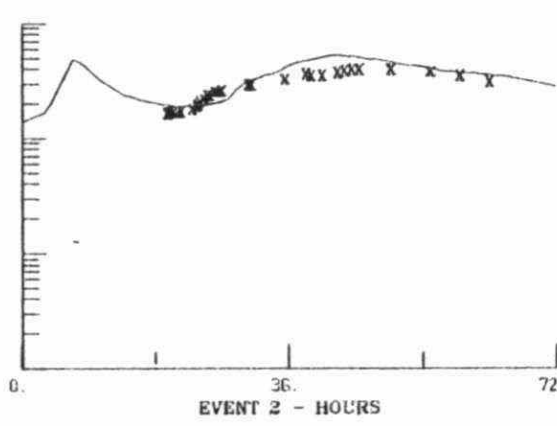
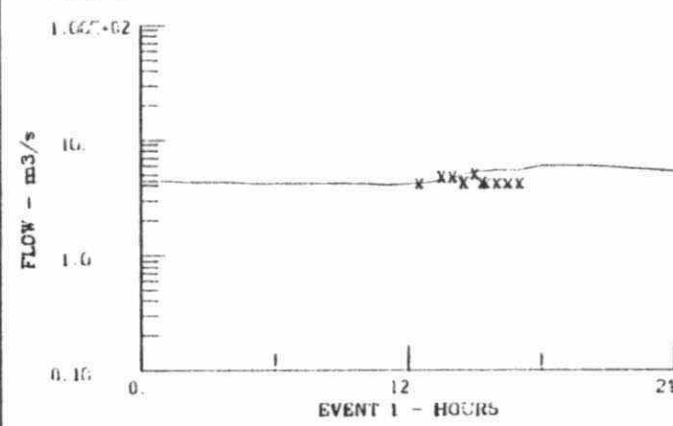
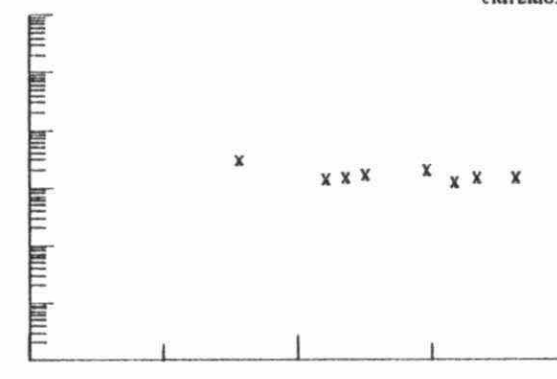
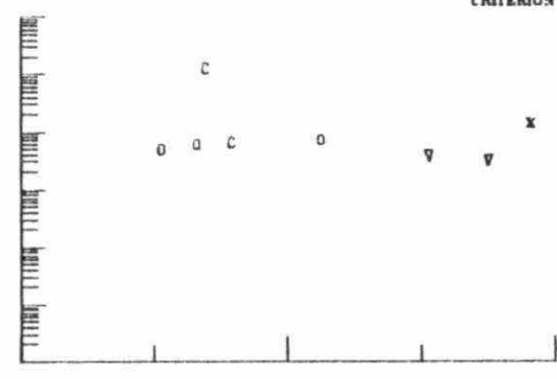
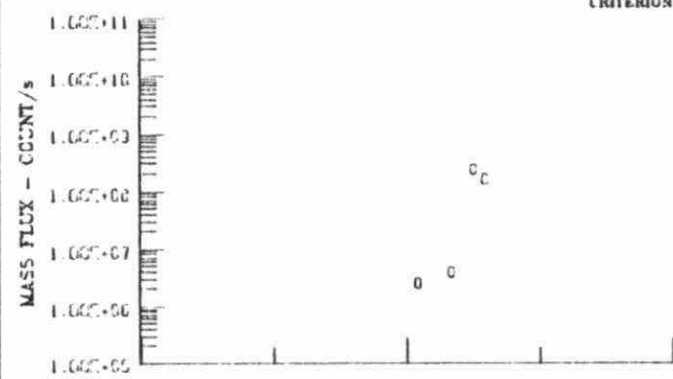
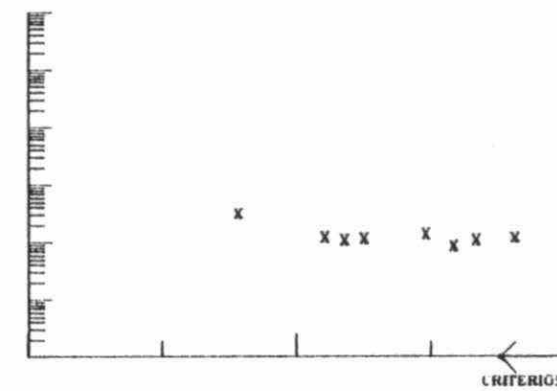
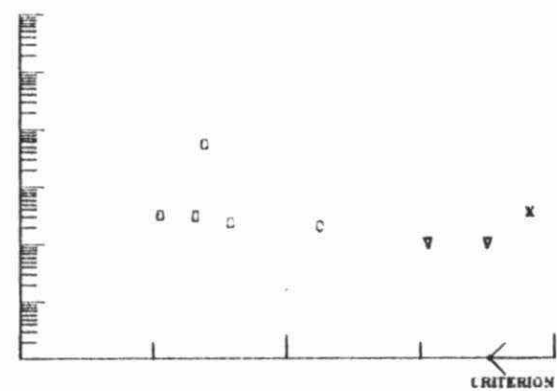
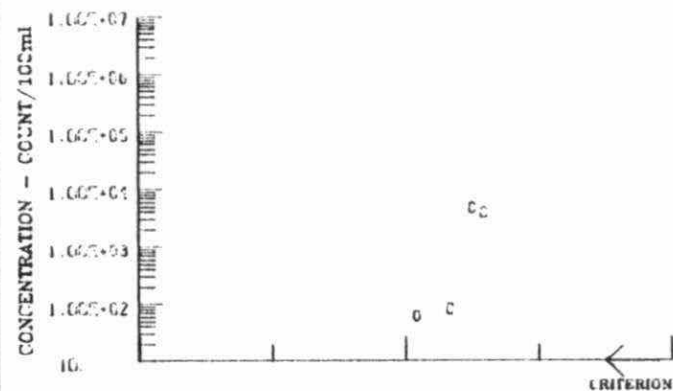
FECAL STREPTOCOCCUS

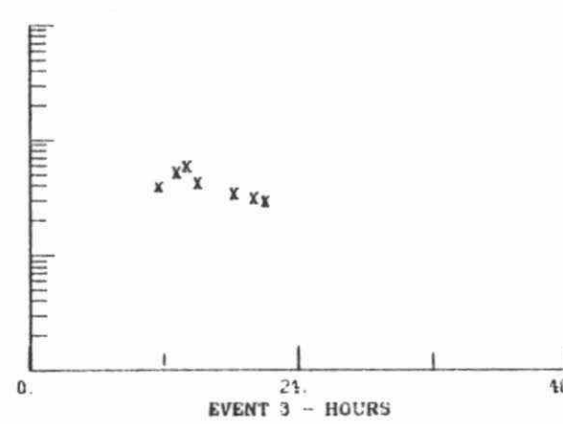
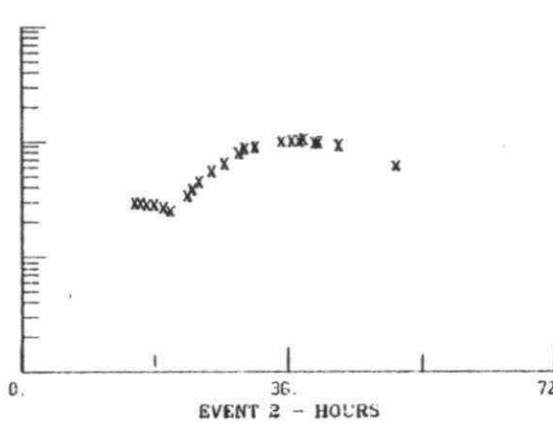
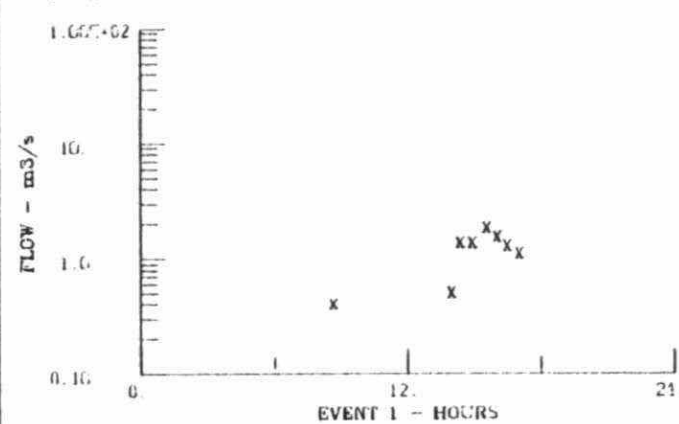
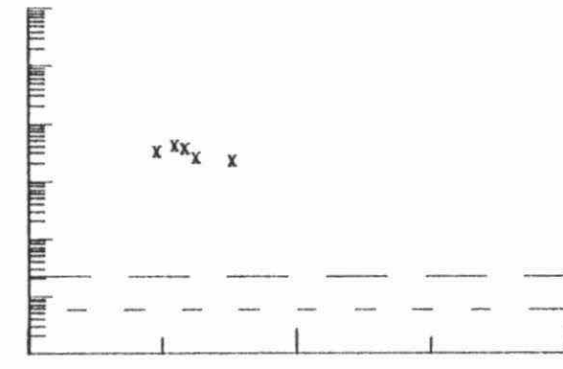
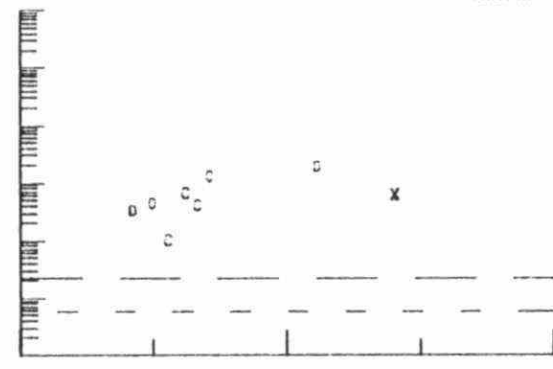
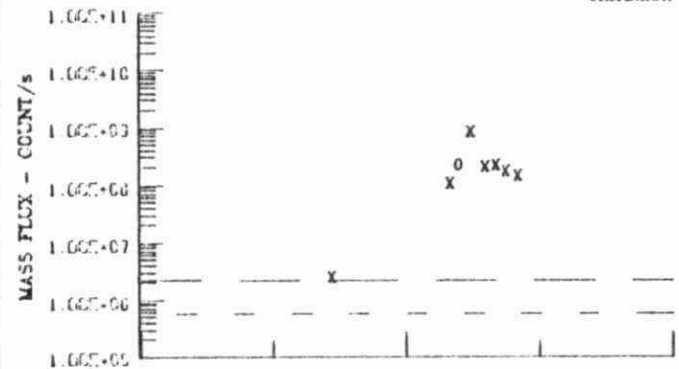
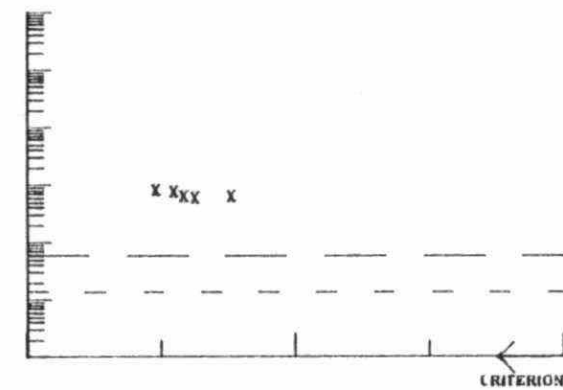
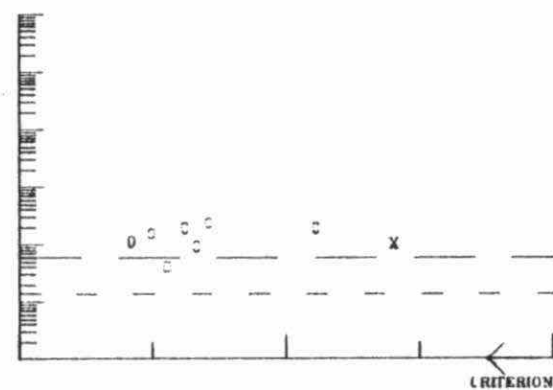
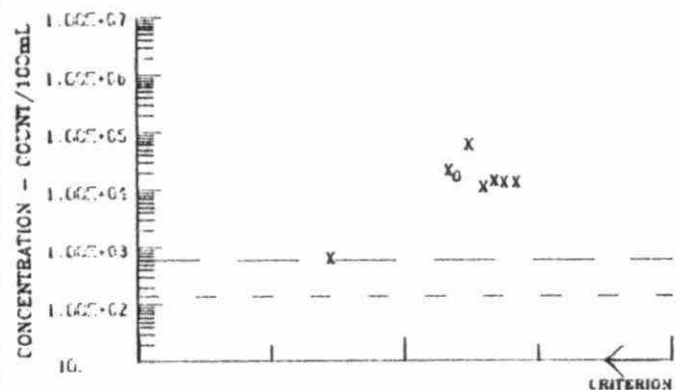


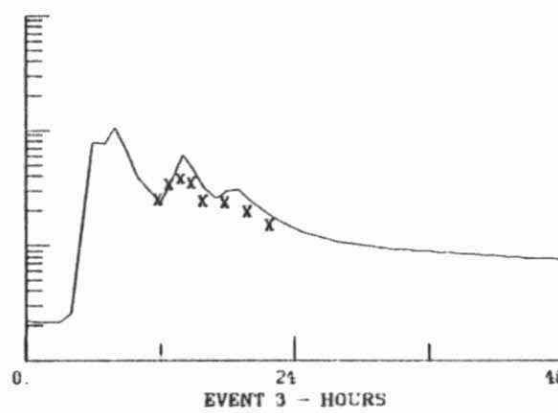
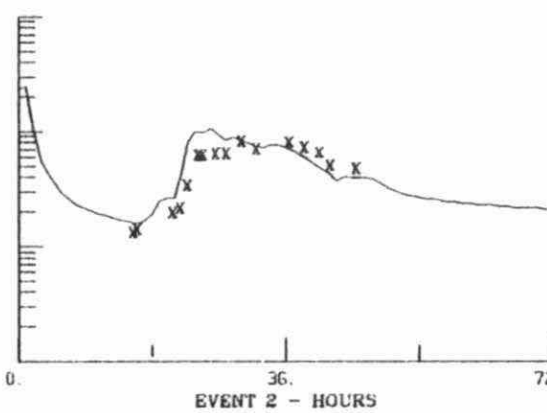
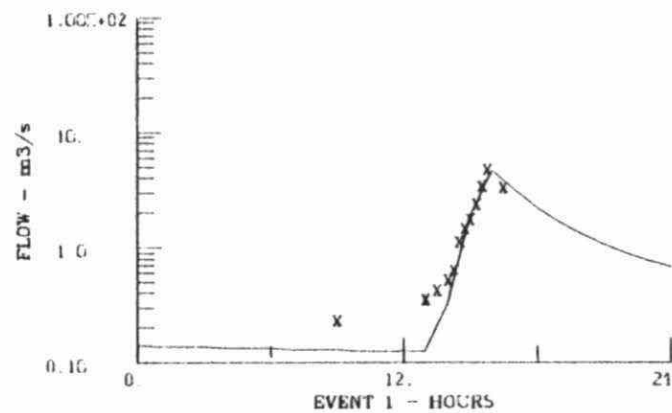
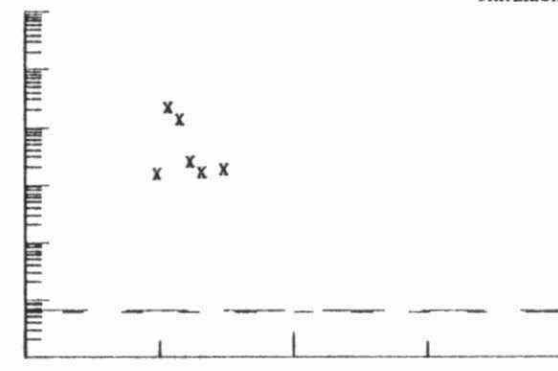
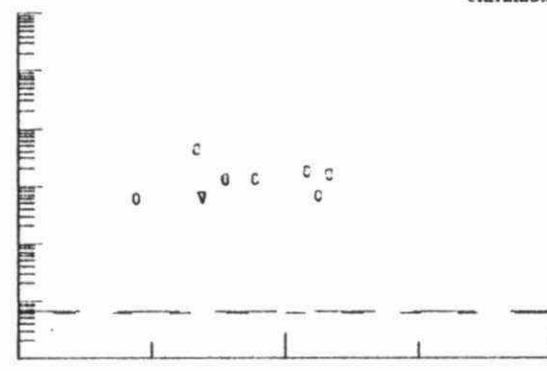
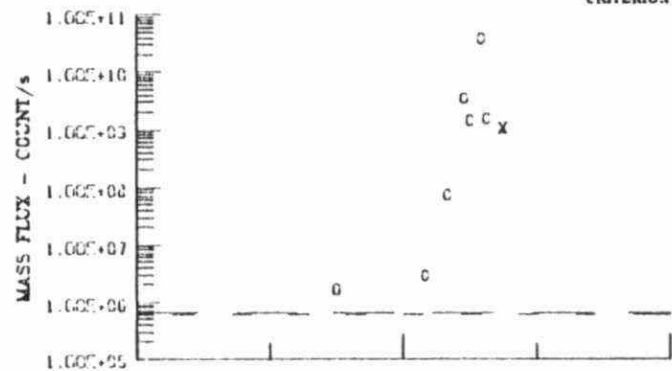
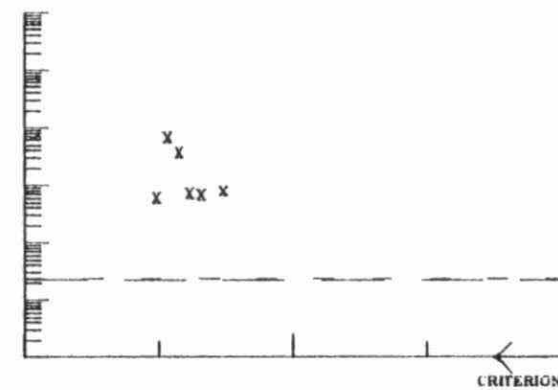
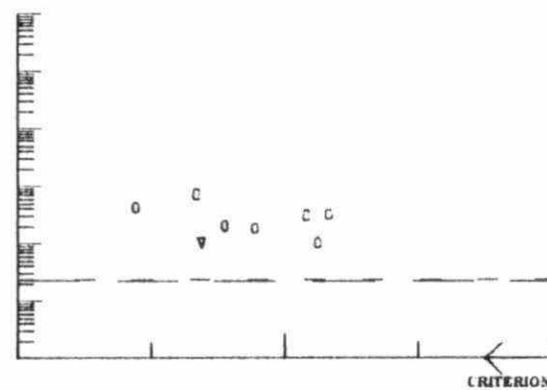
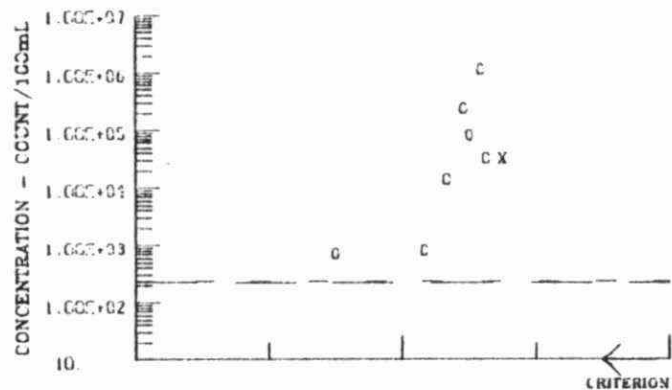
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - FECAL STREPTOCOCCUS

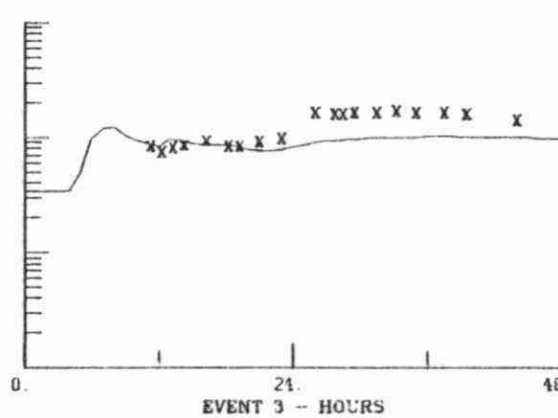
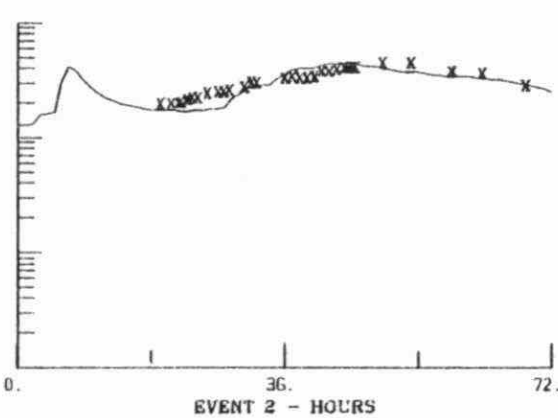
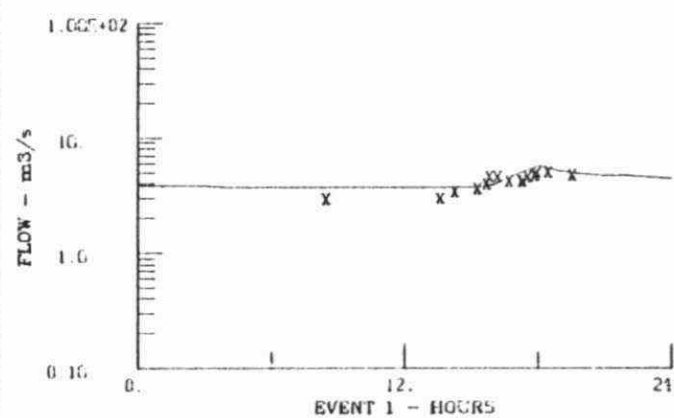
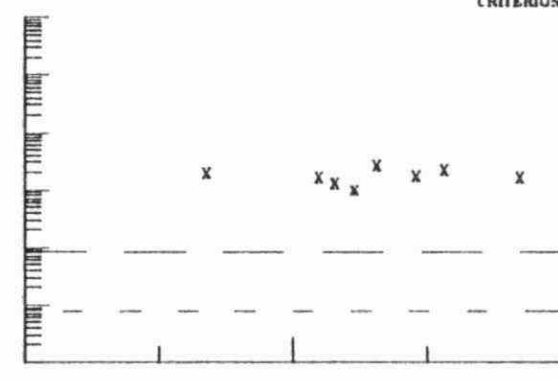
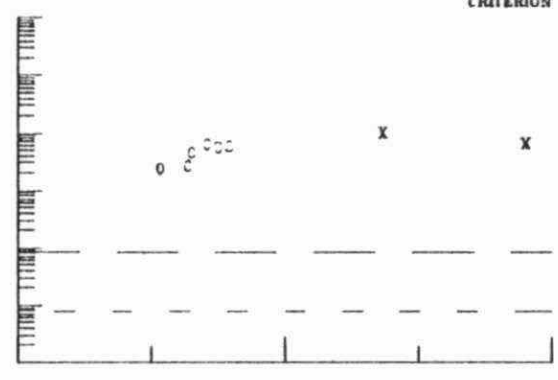
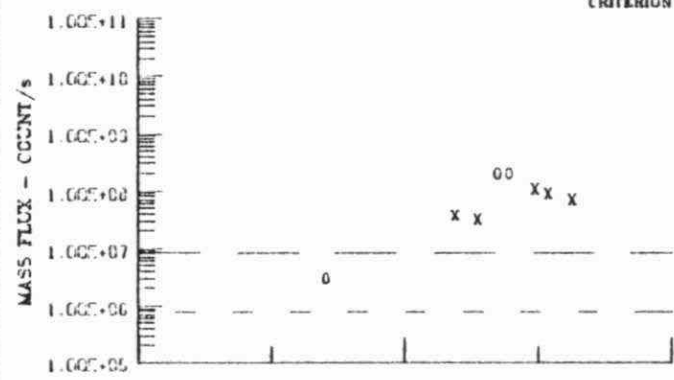
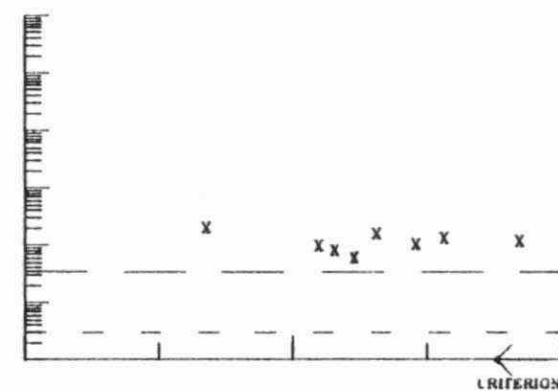
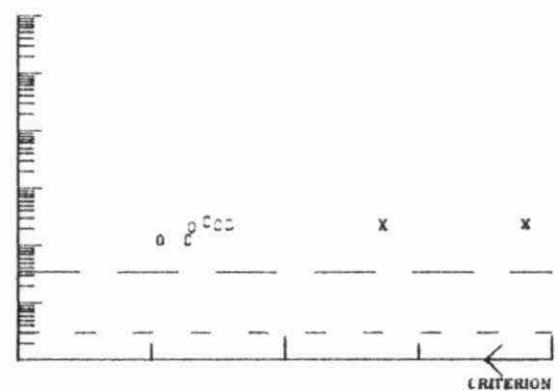
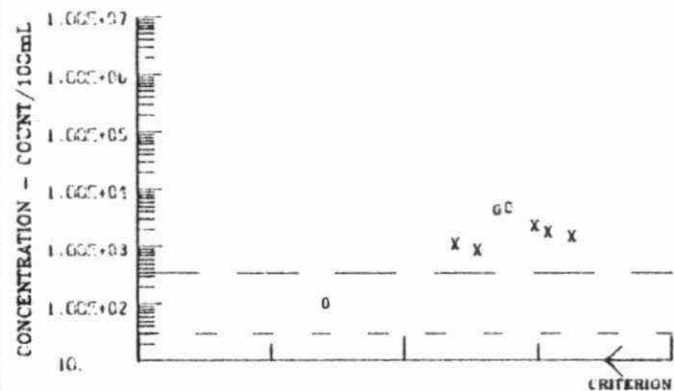


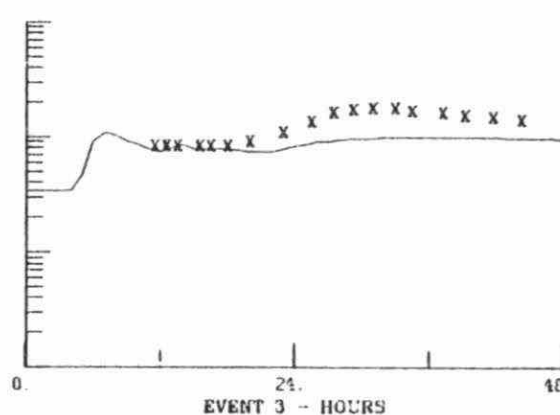
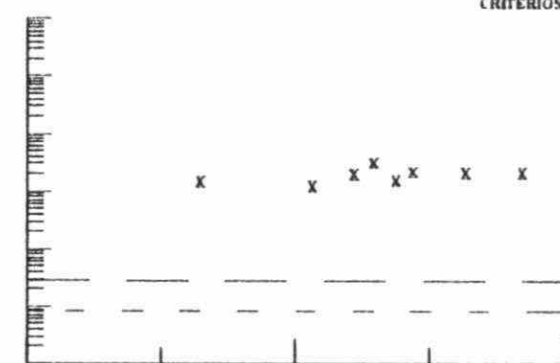
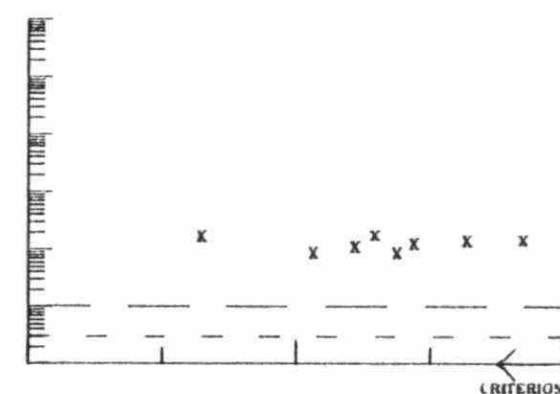
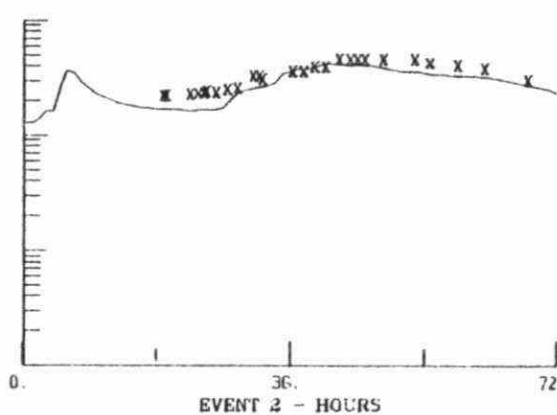
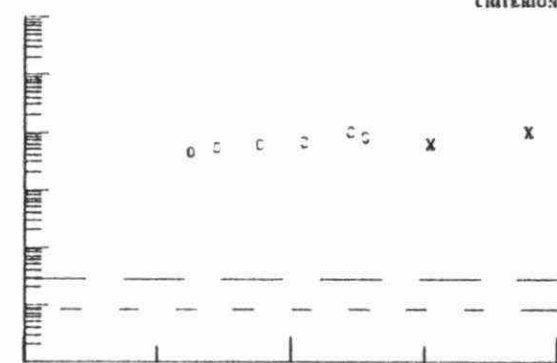
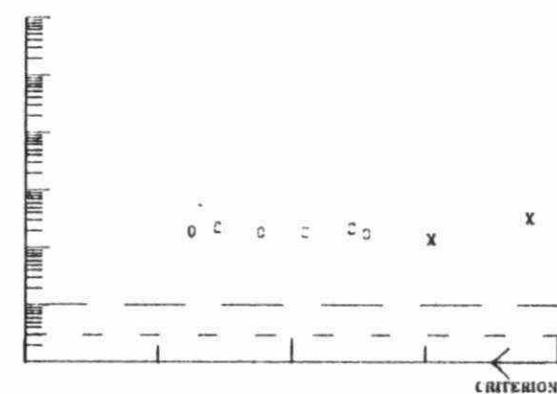
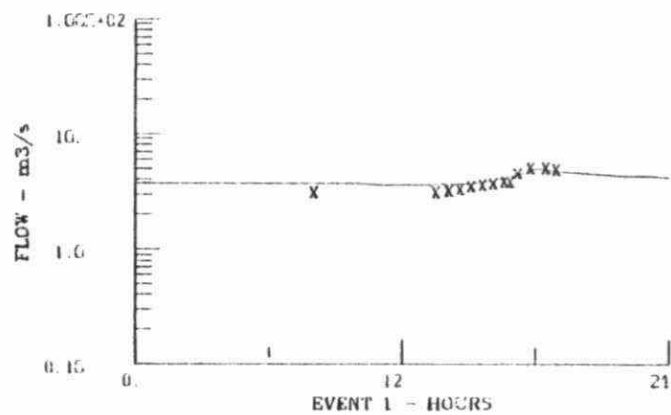
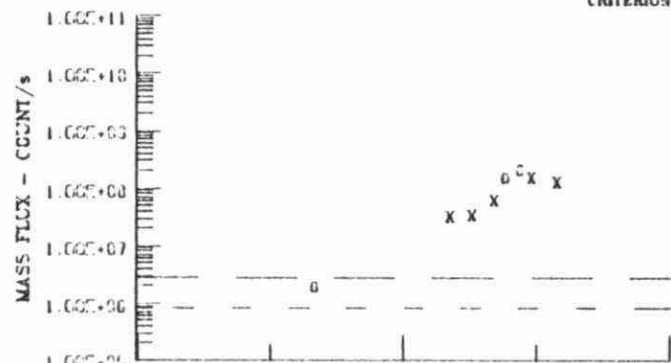
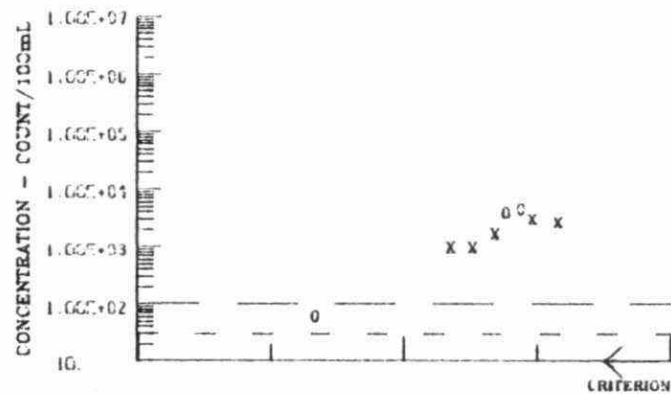
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - FECAL STREPTOCOCCUS



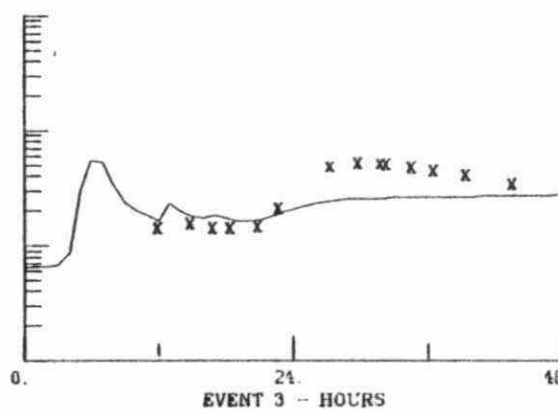
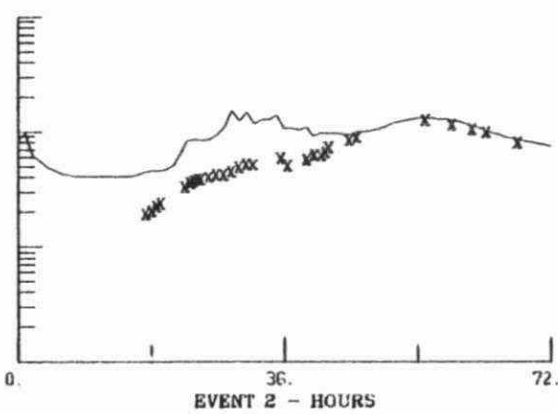
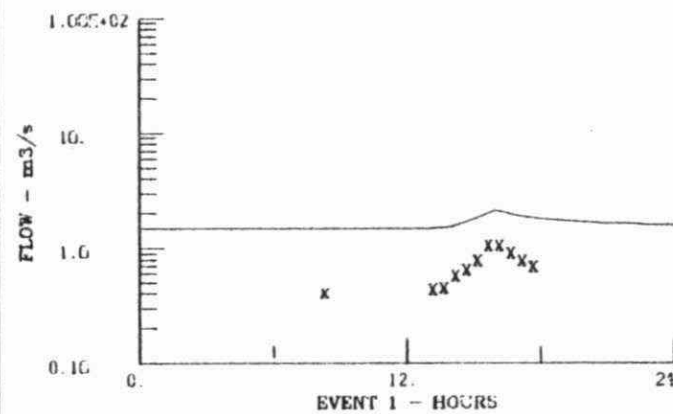
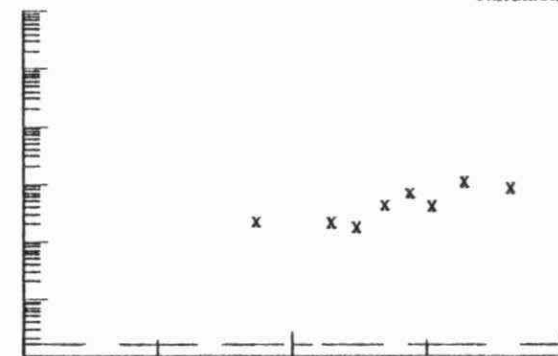
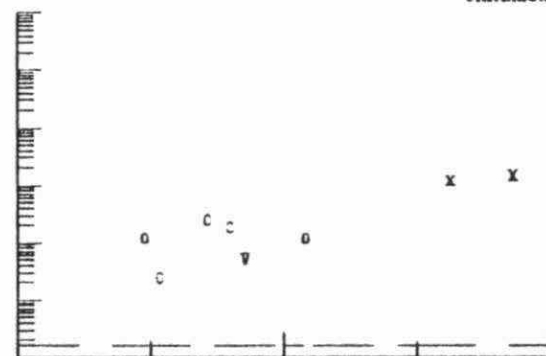
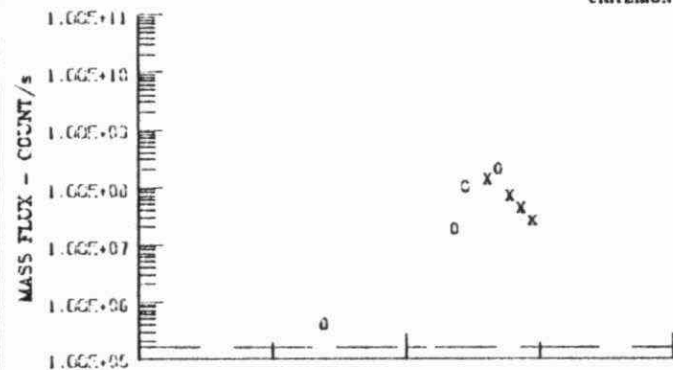
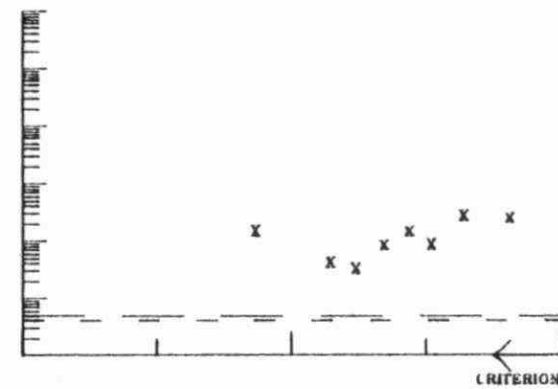
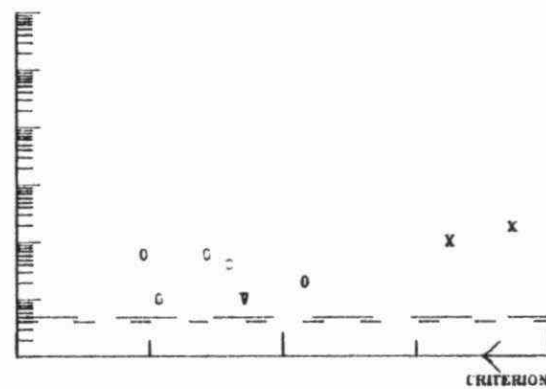
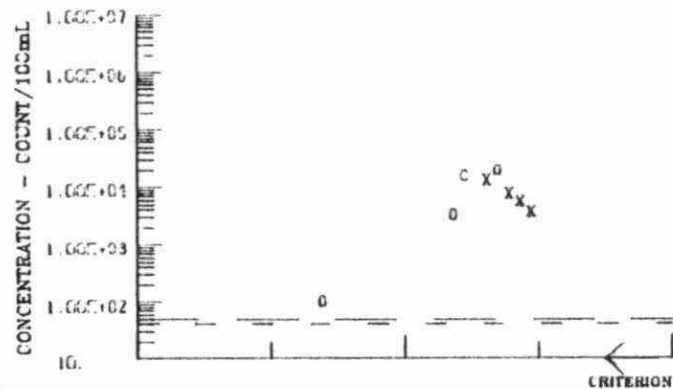




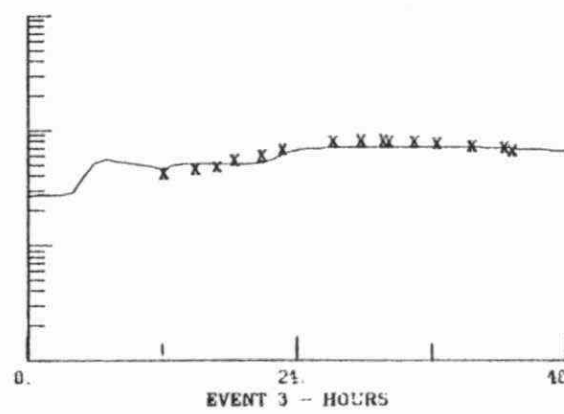
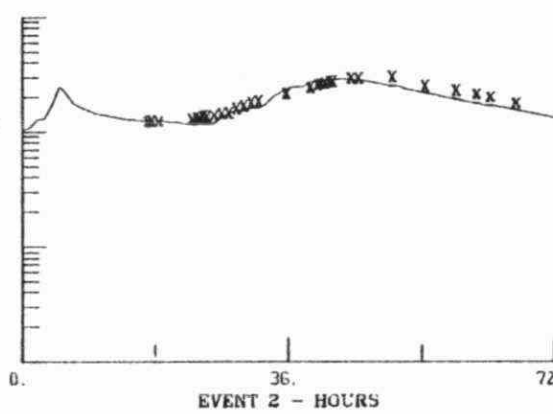
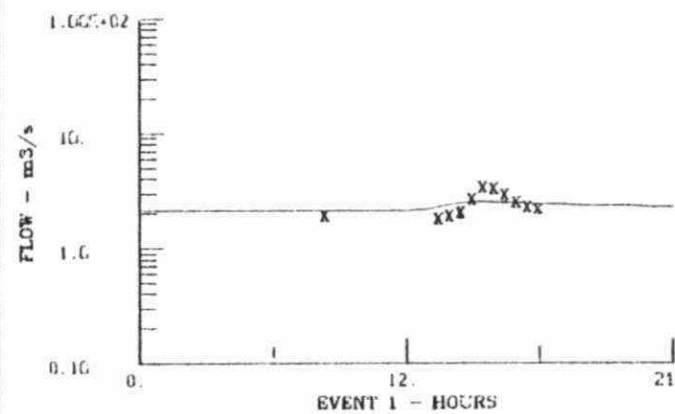
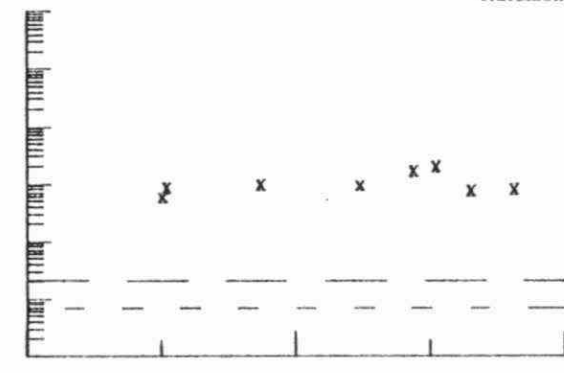
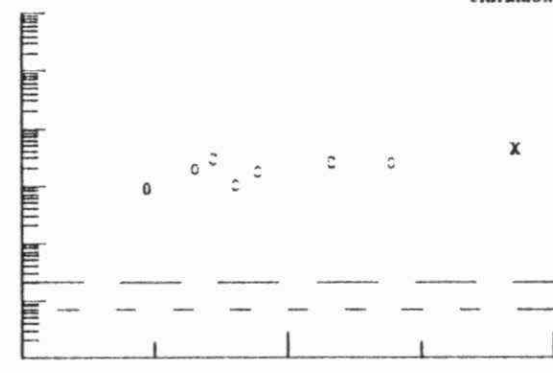
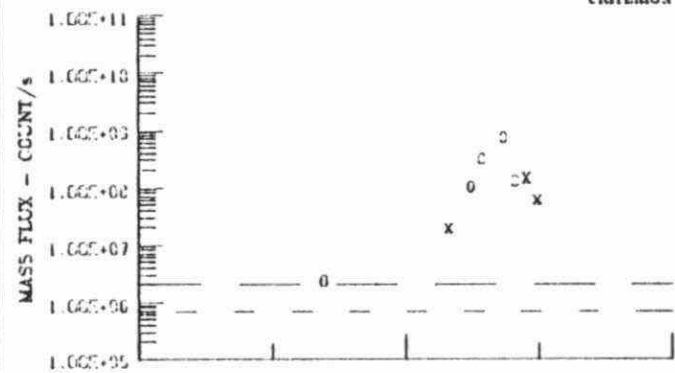
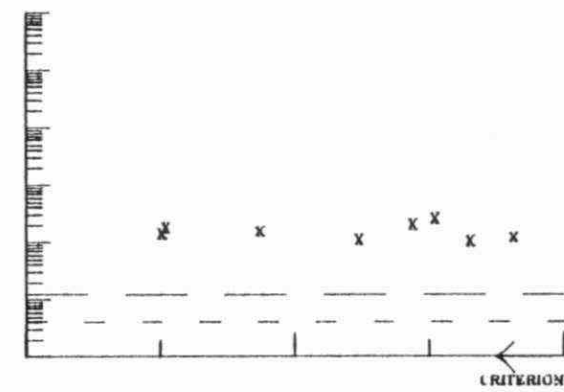
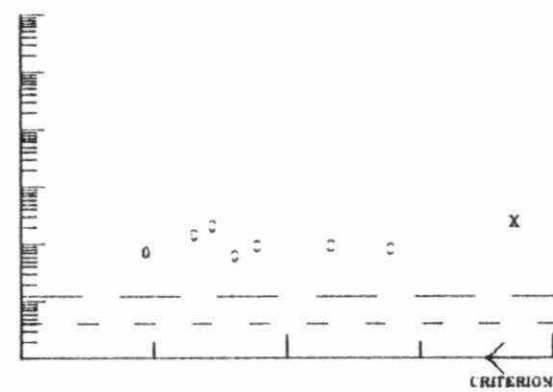
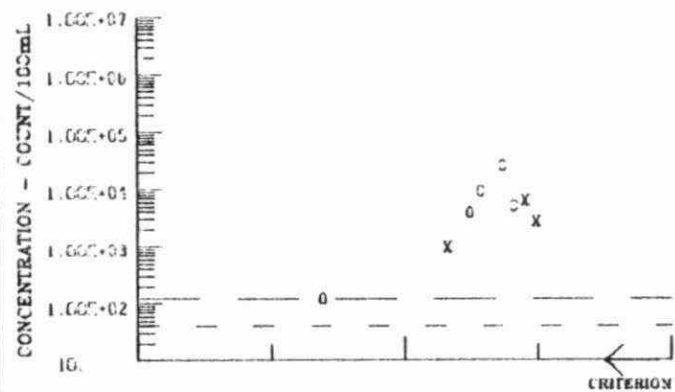




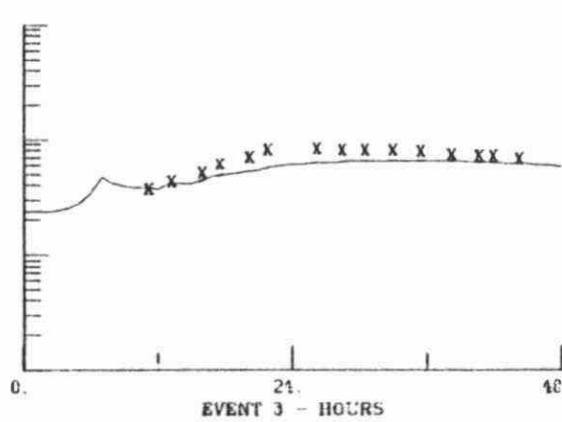
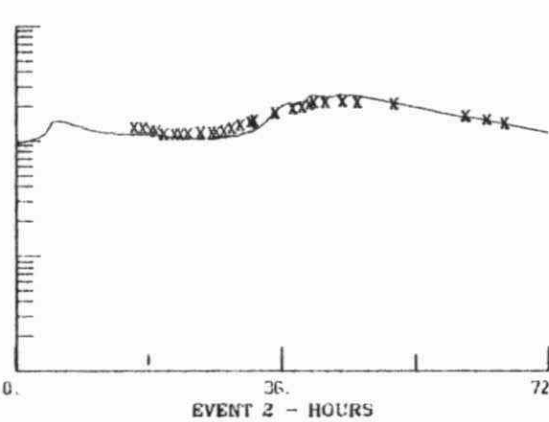
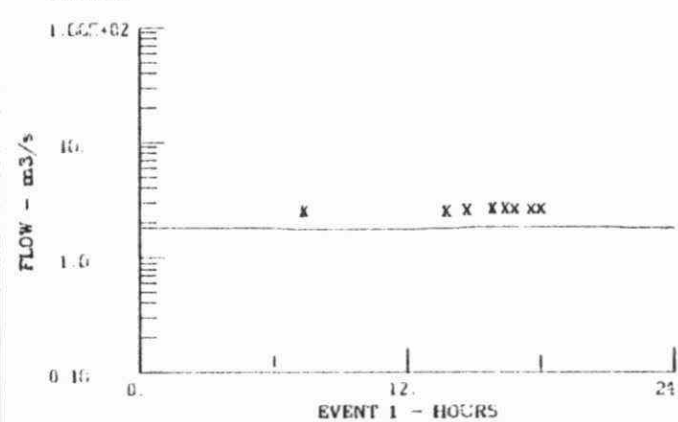
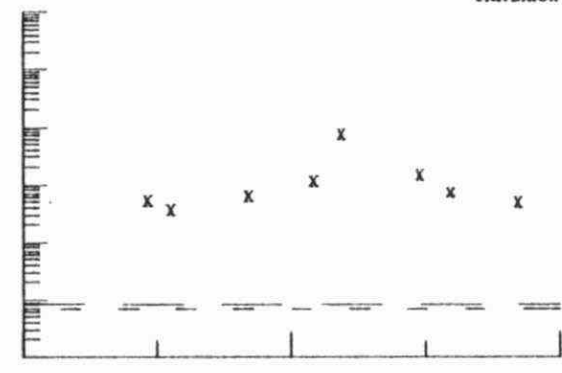
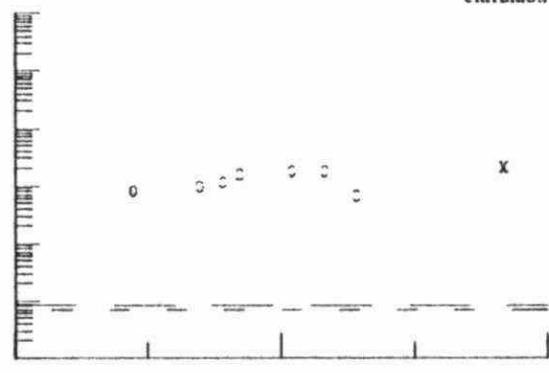
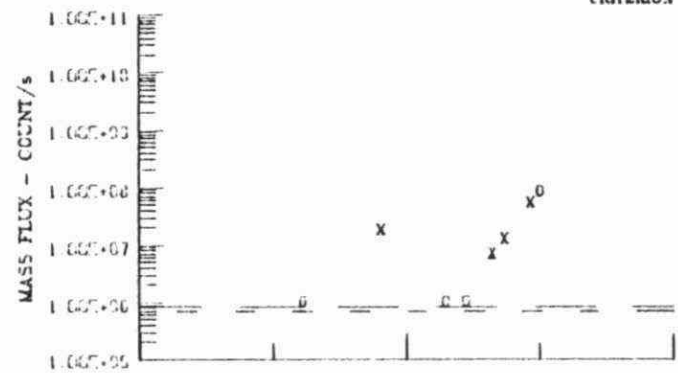
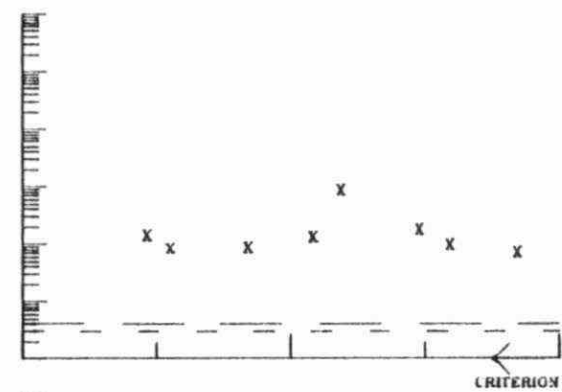
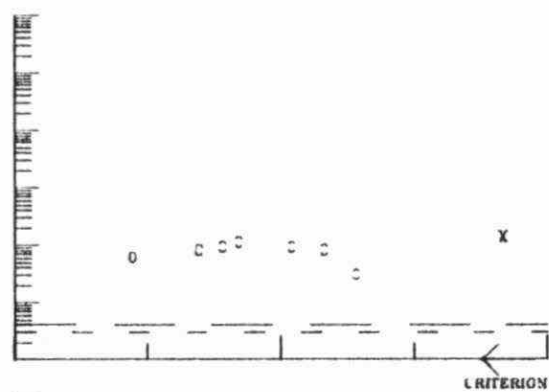
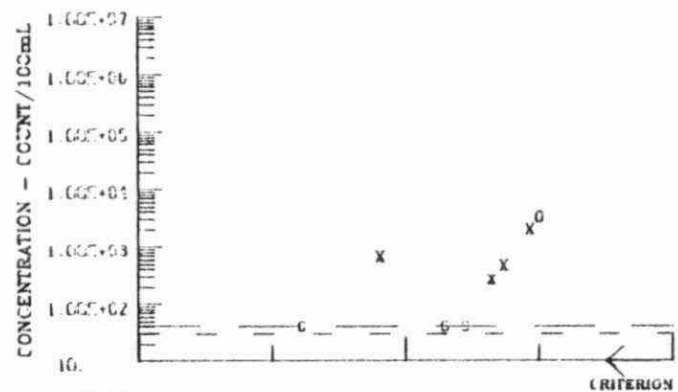
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - FECAL STREPTOCOCCUS



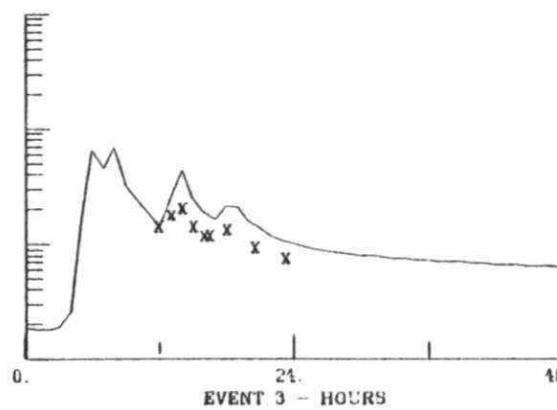
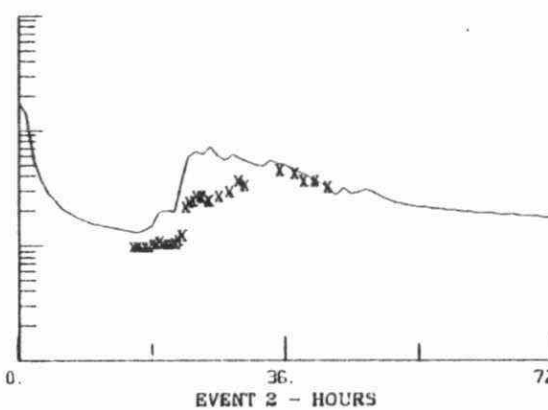
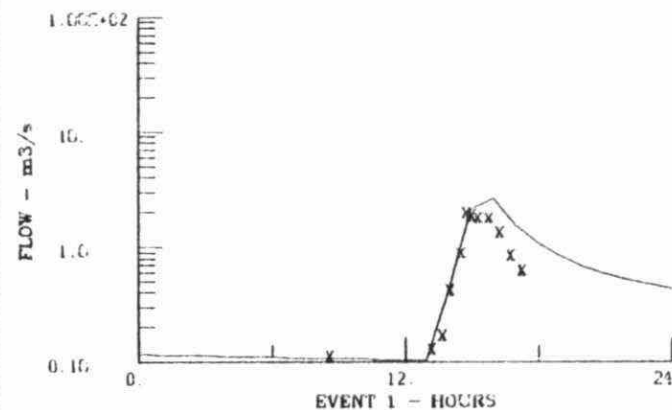
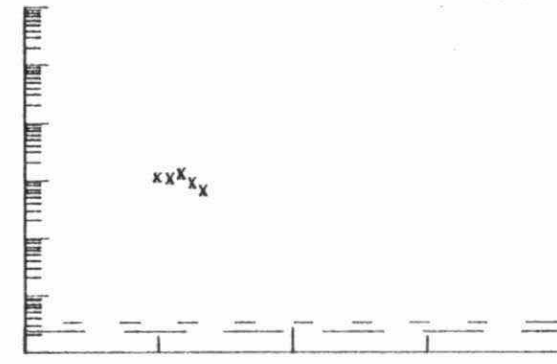
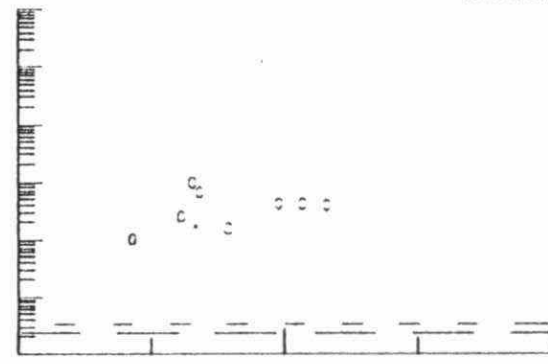
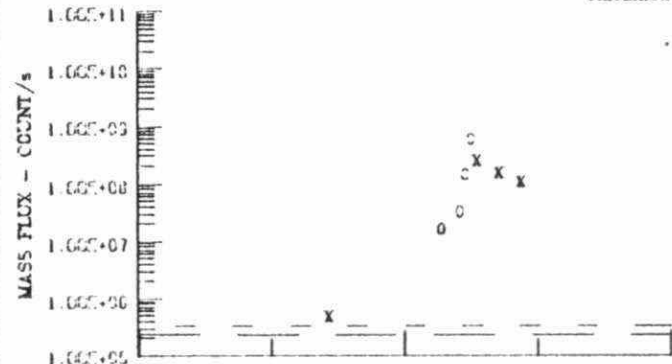
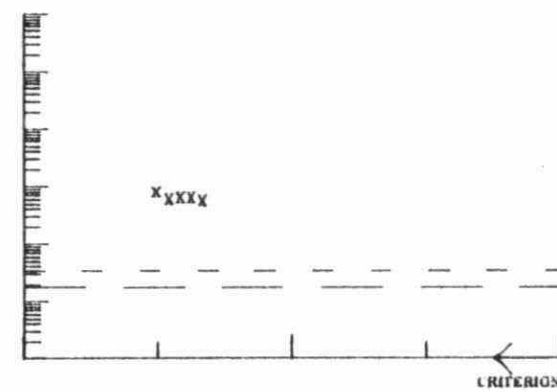
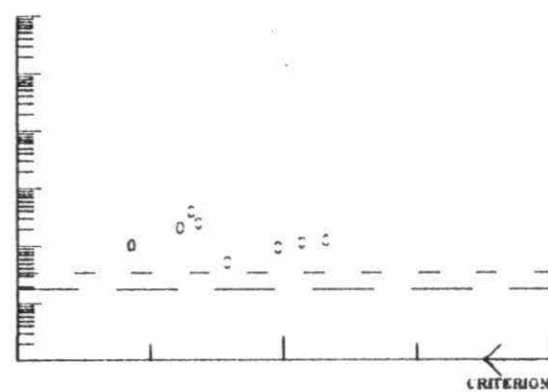
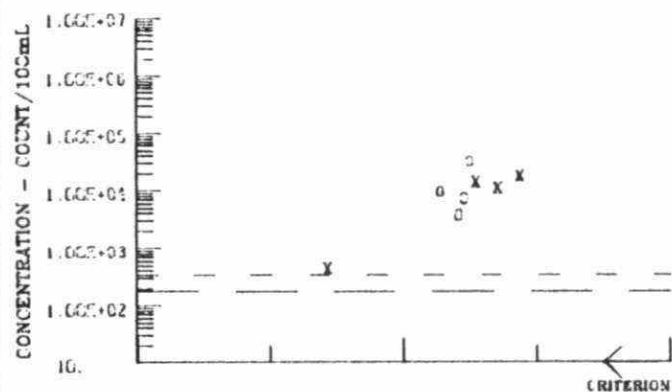
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - FECAL STREPTOCOCCUS



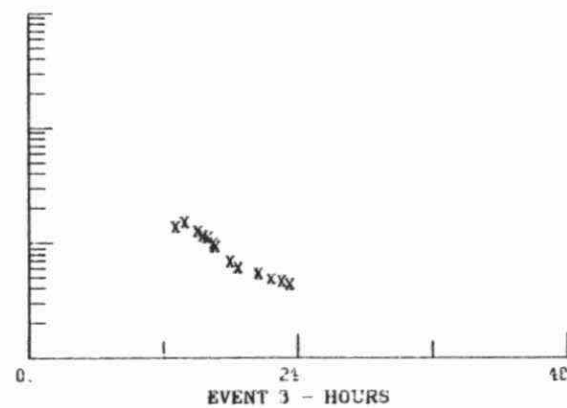
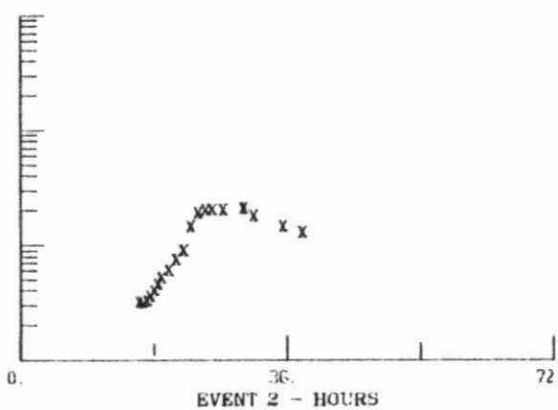
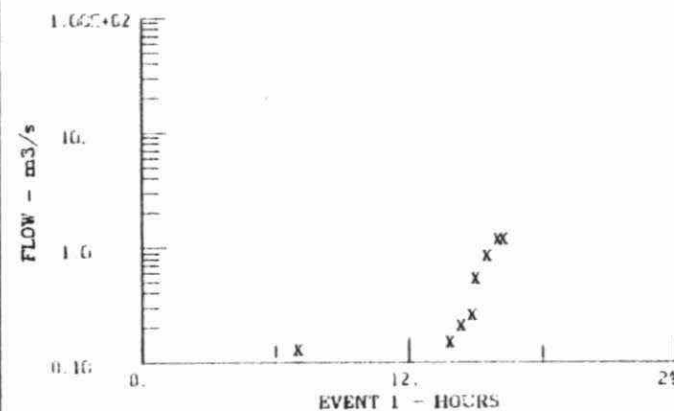
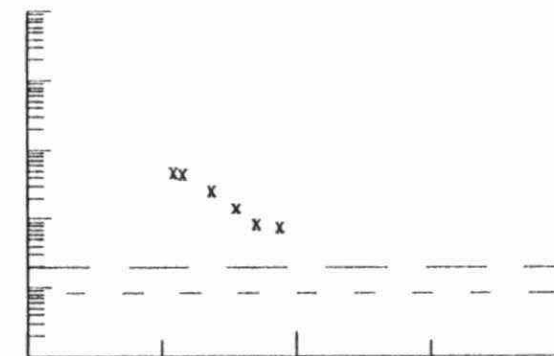
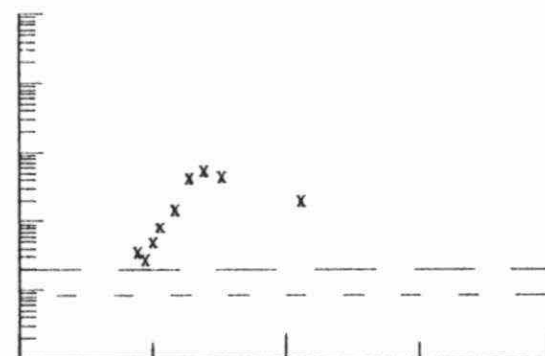
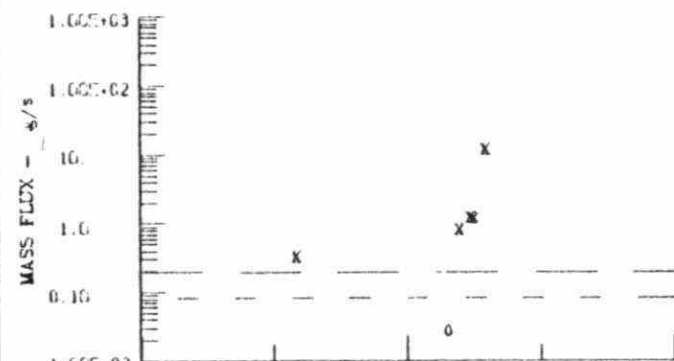
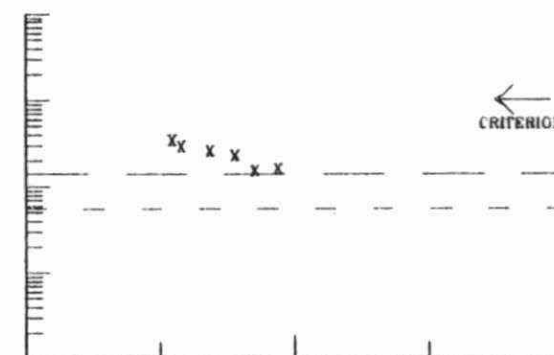
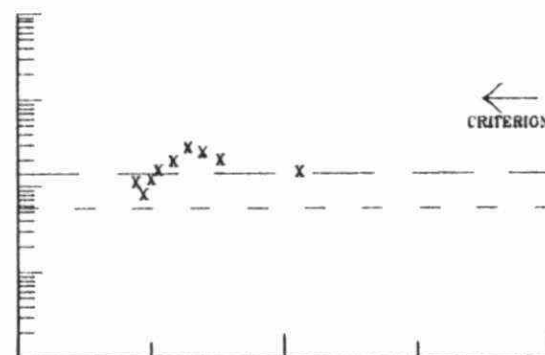
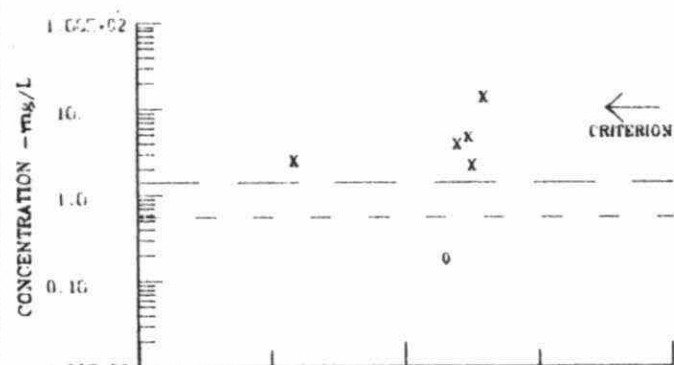
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - FECAL STREPTOCOCCUS



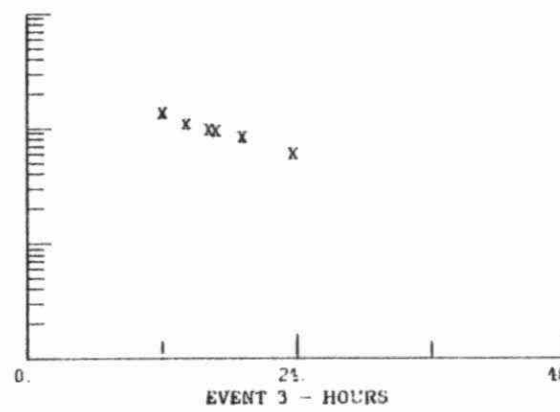
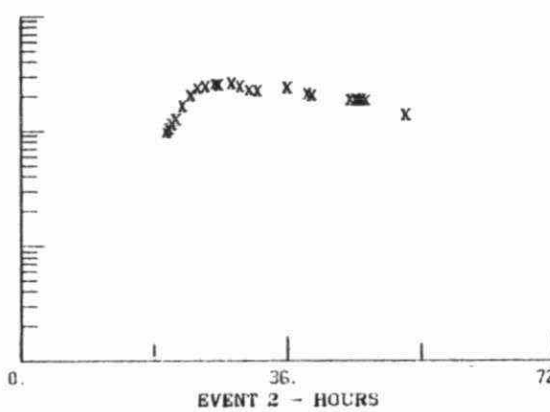
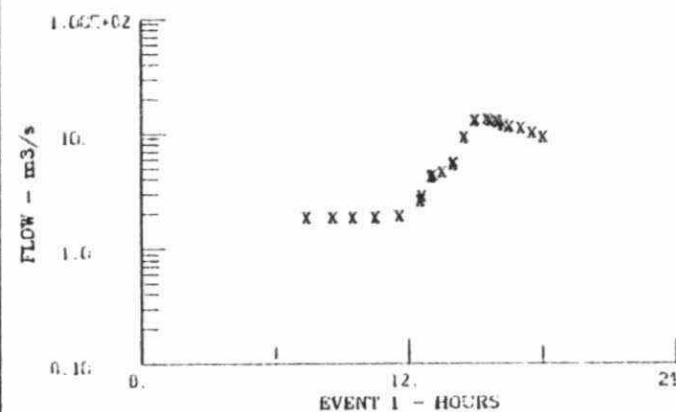
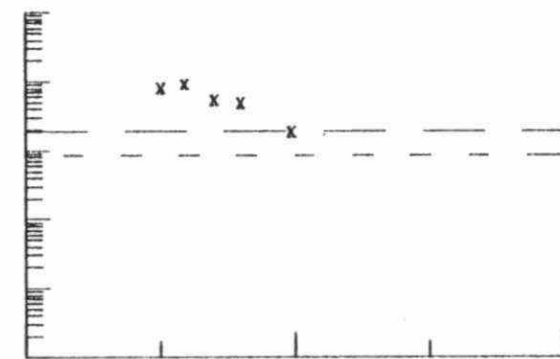
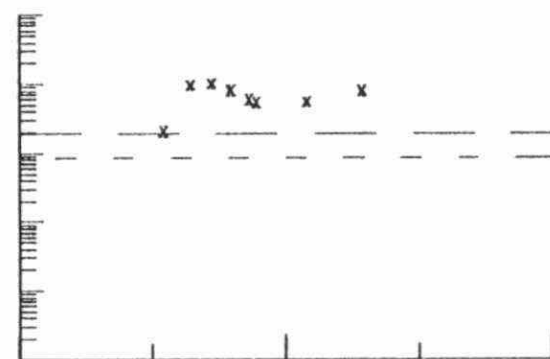
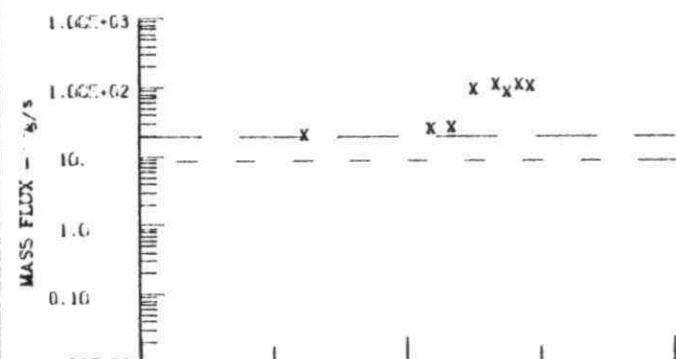
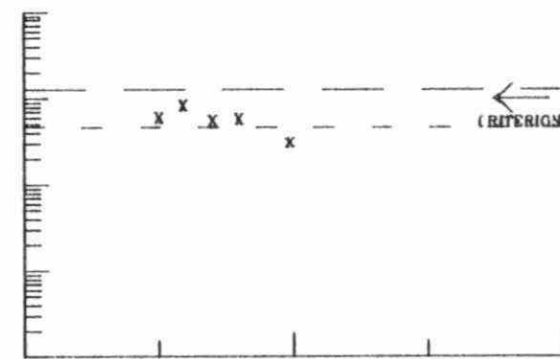
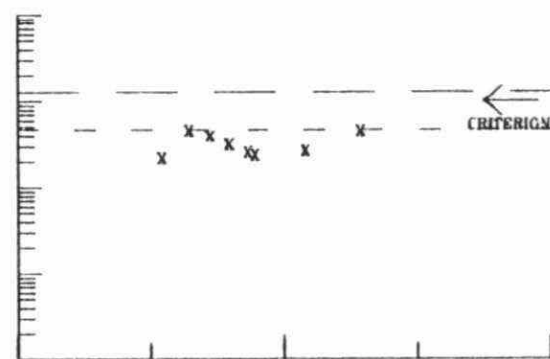
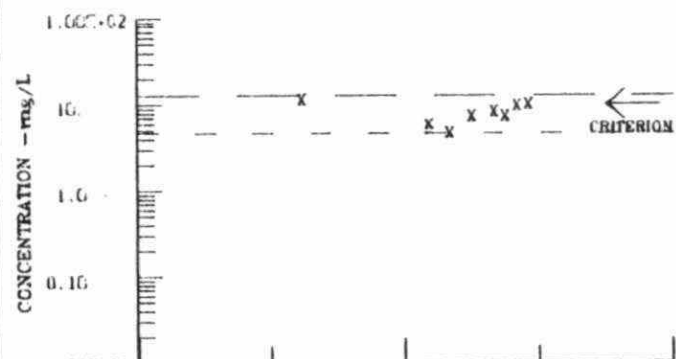
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - FECAL STREPTOCOCCUS



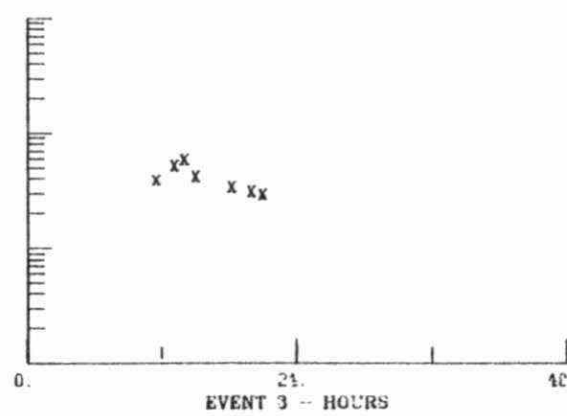
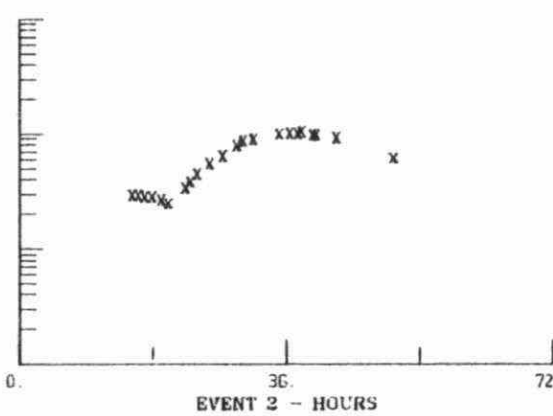
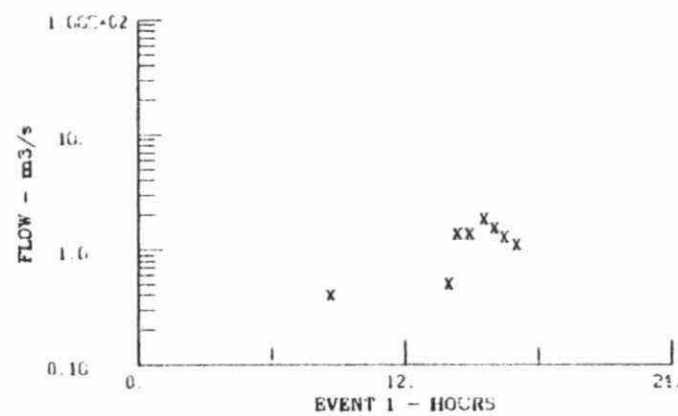
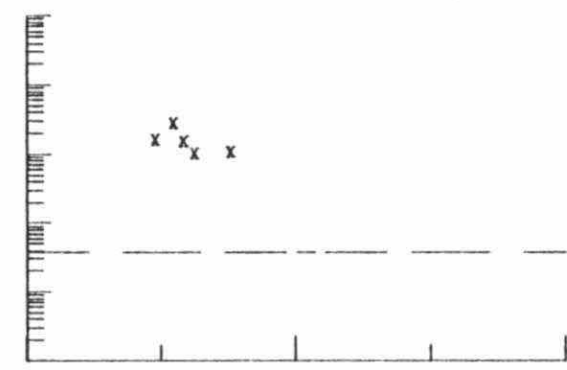
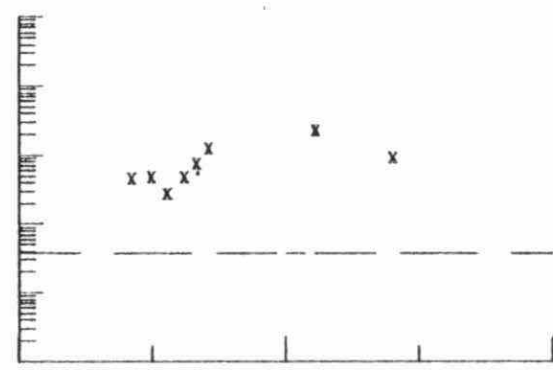
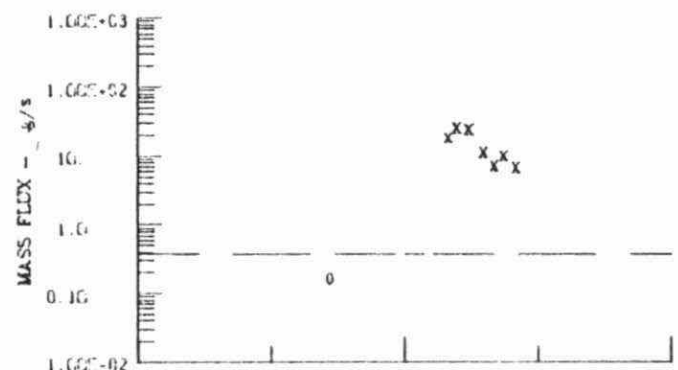
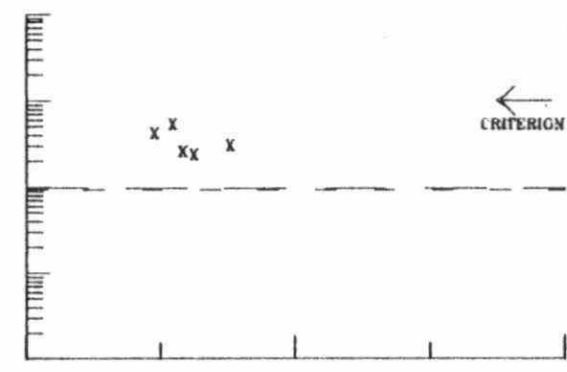
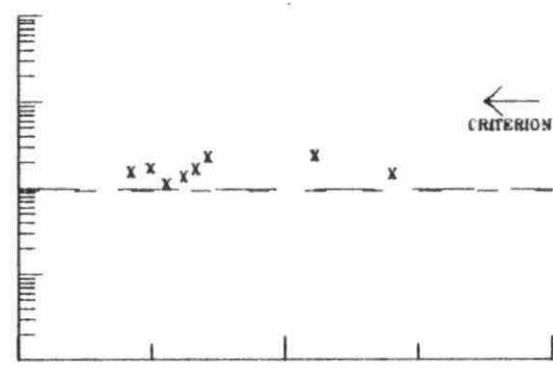
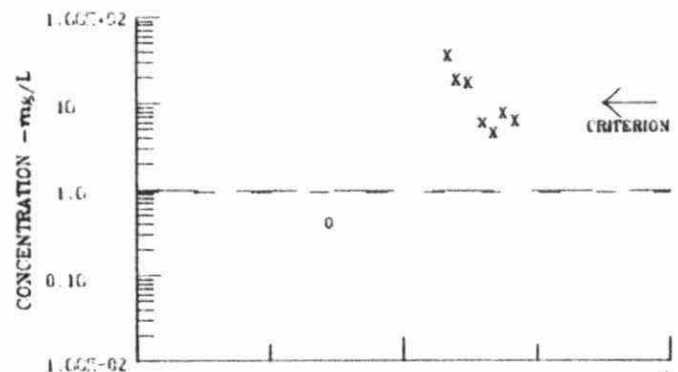
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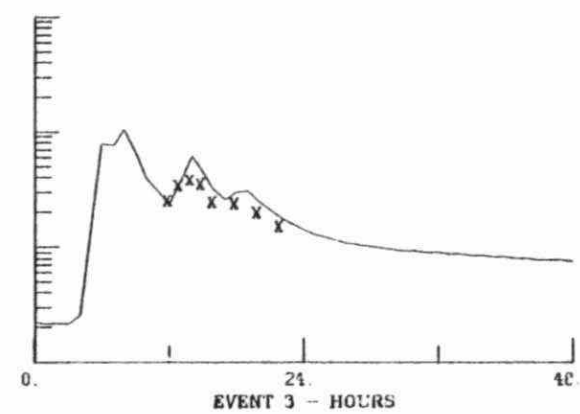
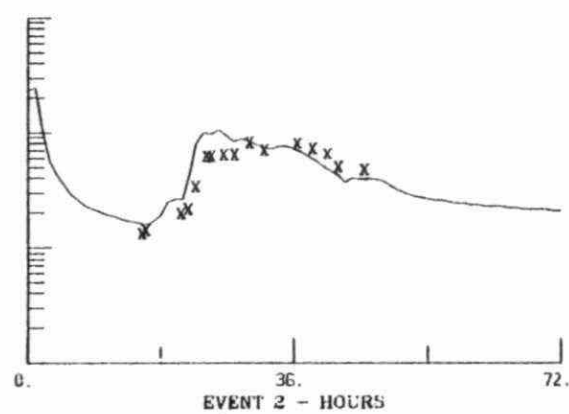
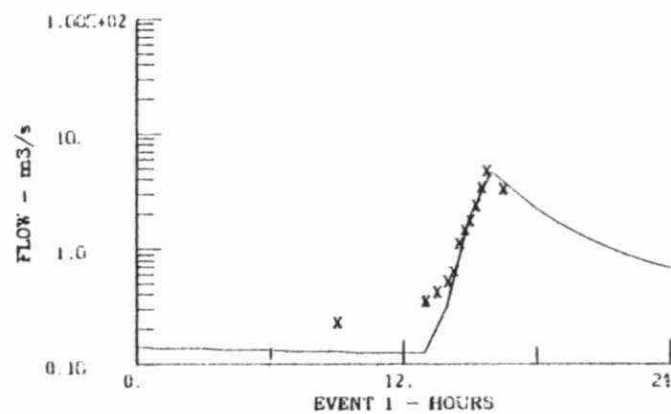
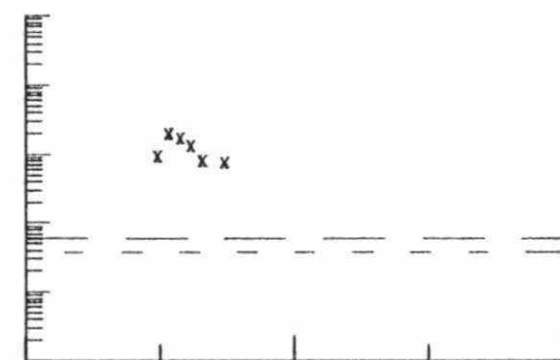
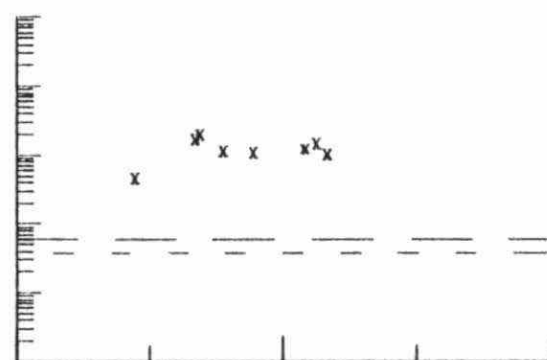
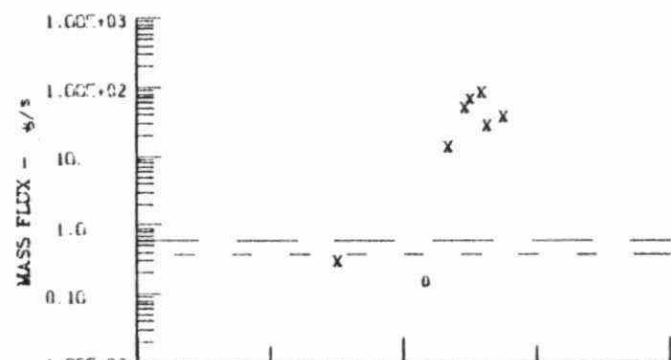
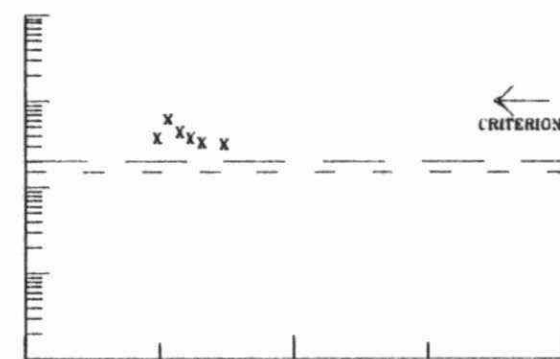
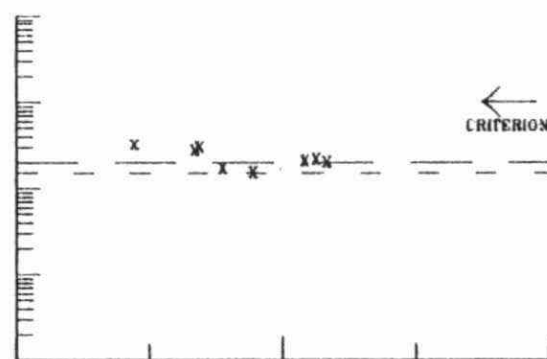
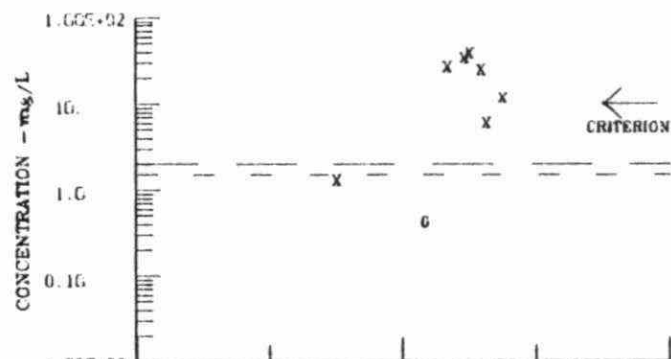


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - BOD5

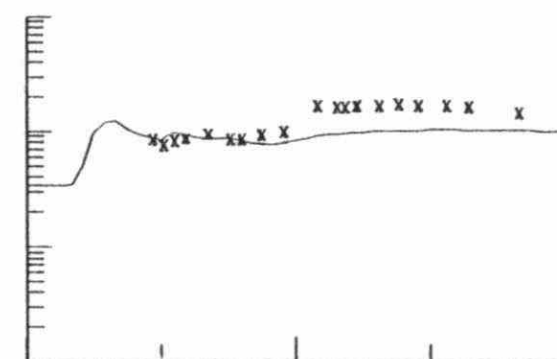
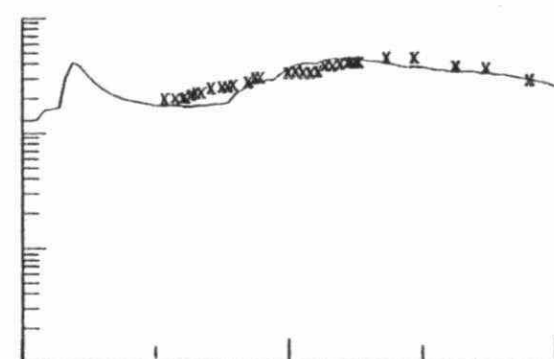
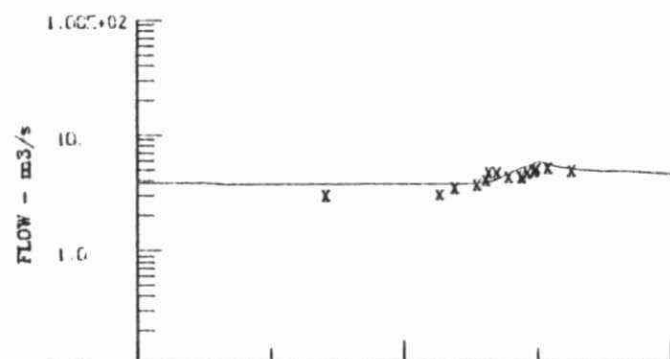
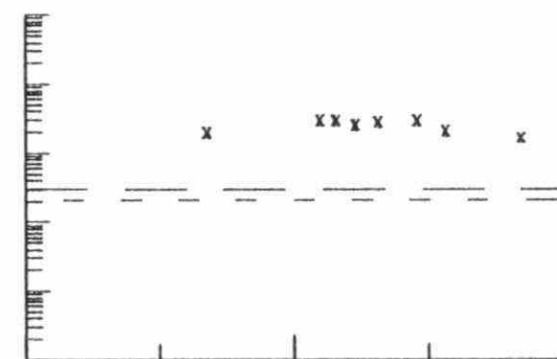
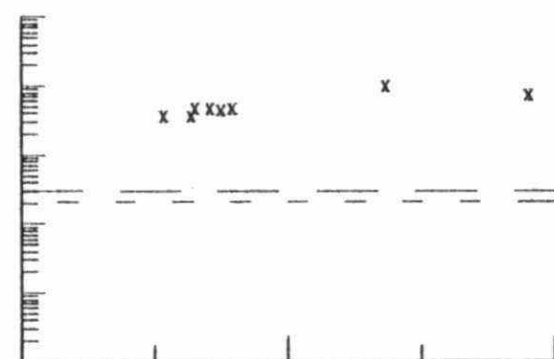
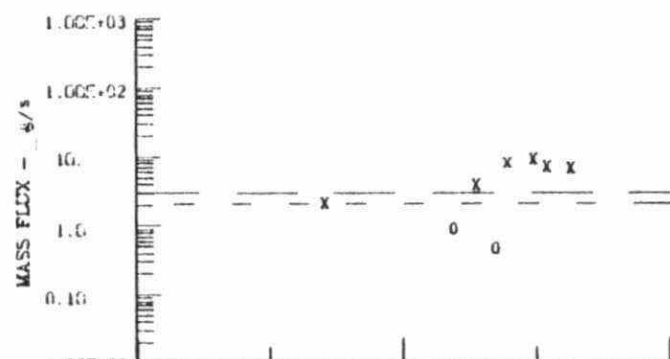
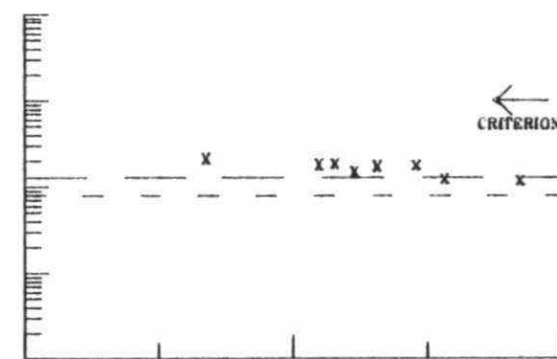
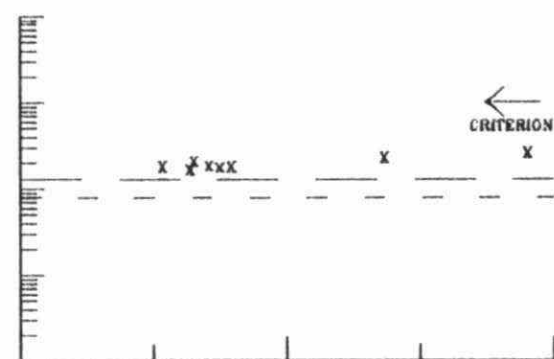
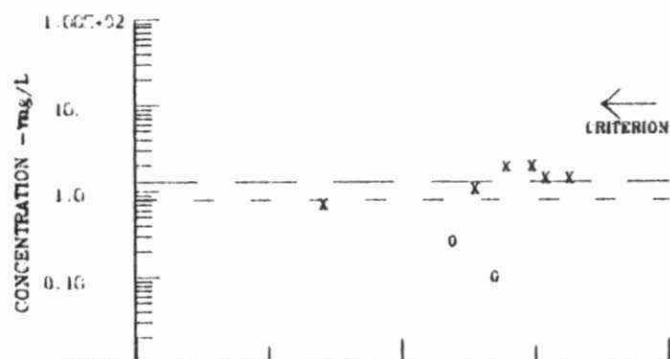


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - BOD5





ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - BOD5

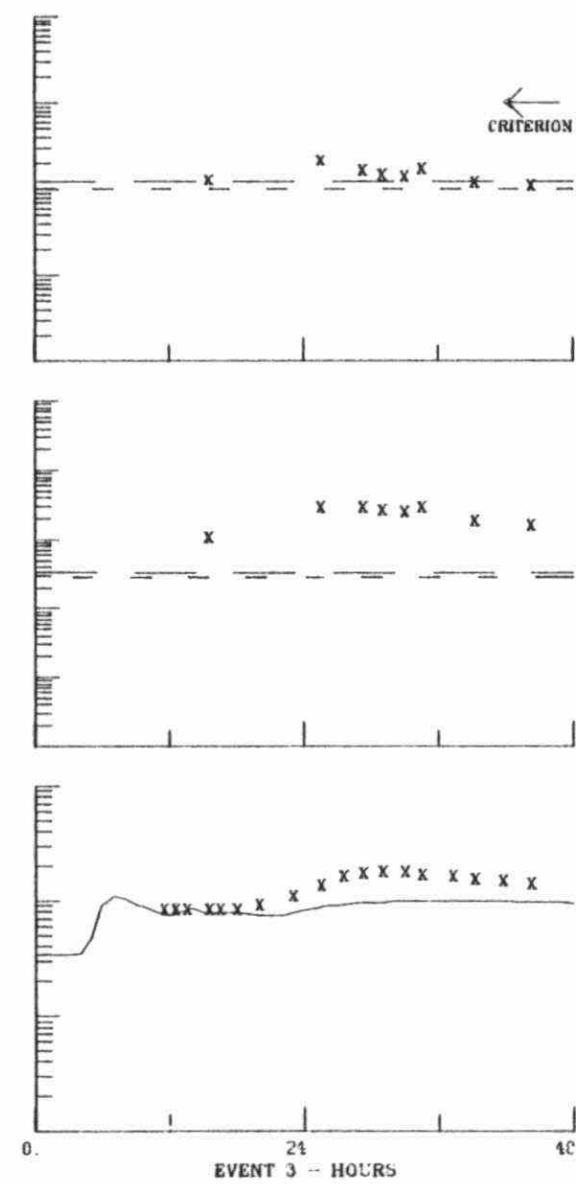
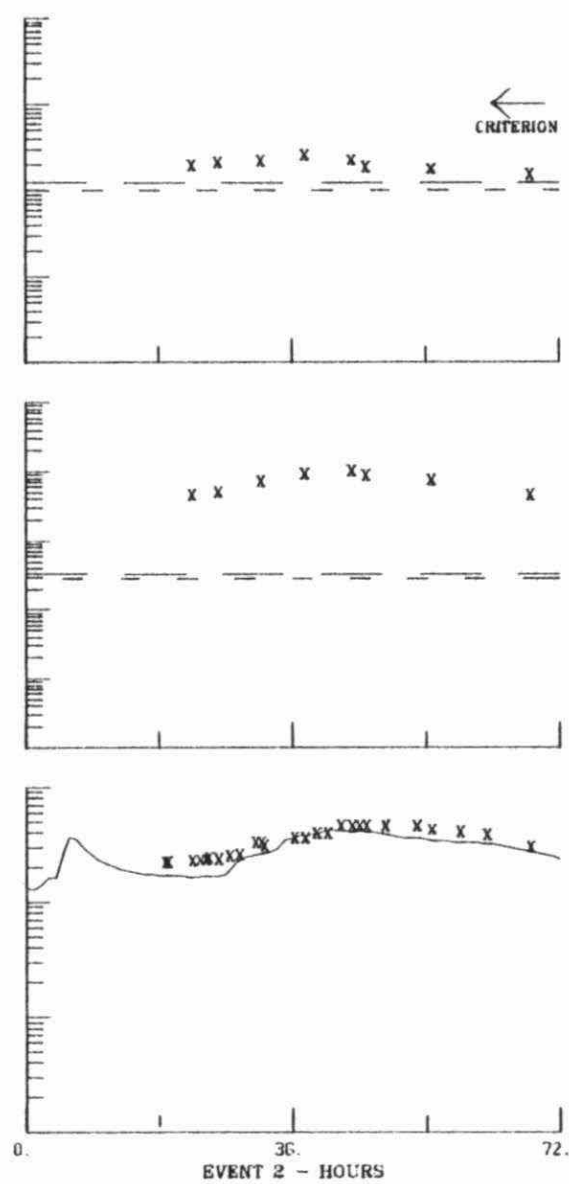
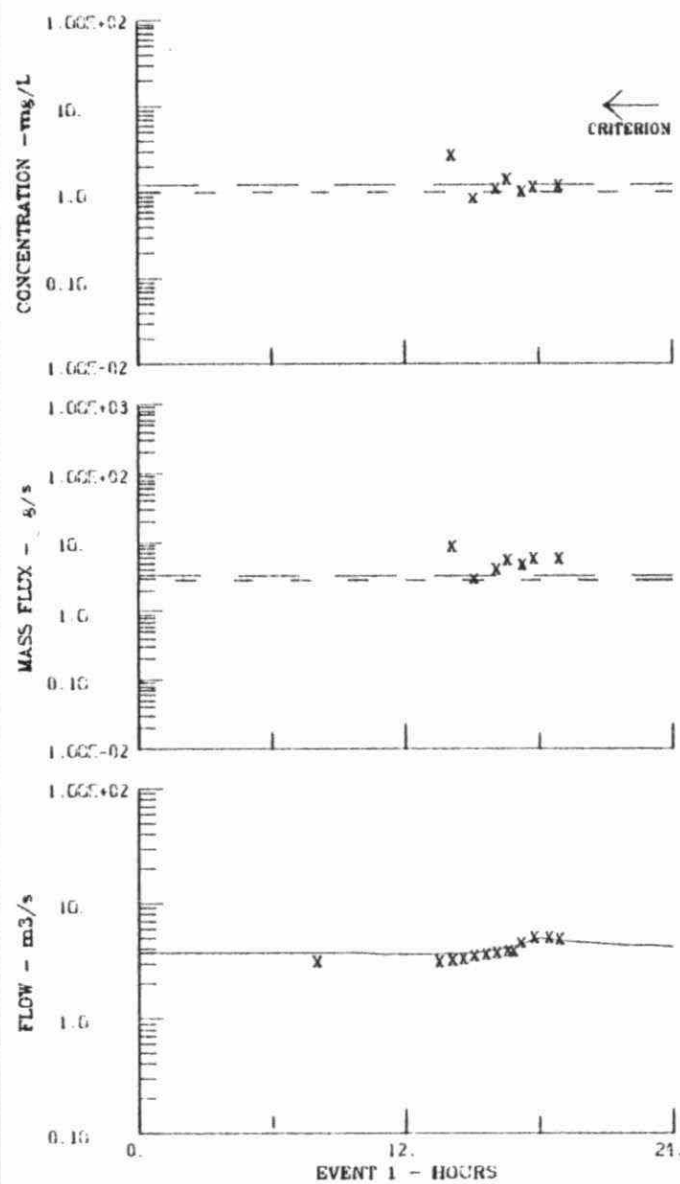


EVENT 1 - HOURS

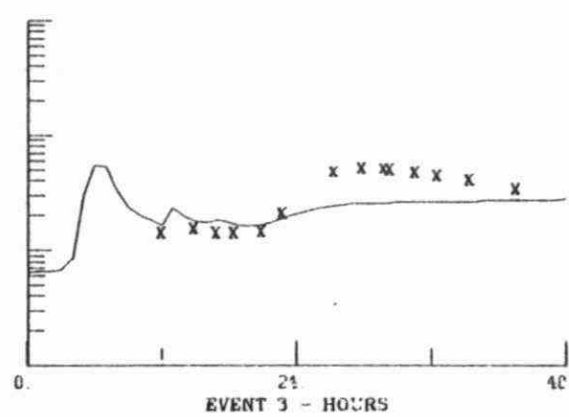
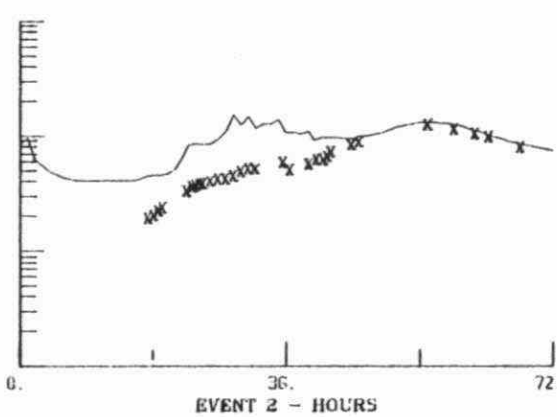
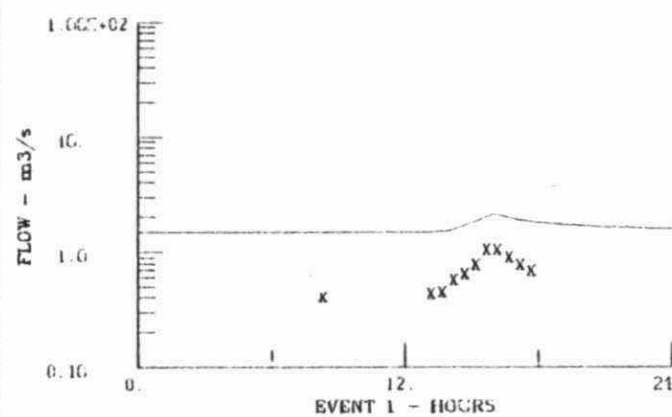
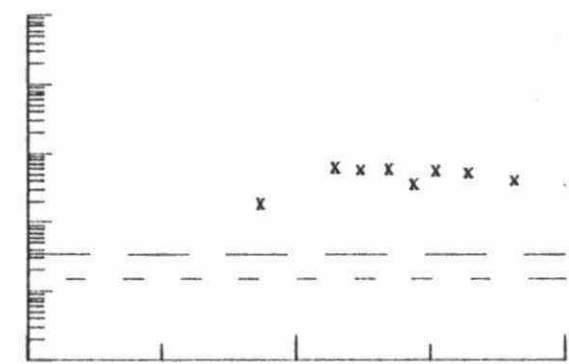
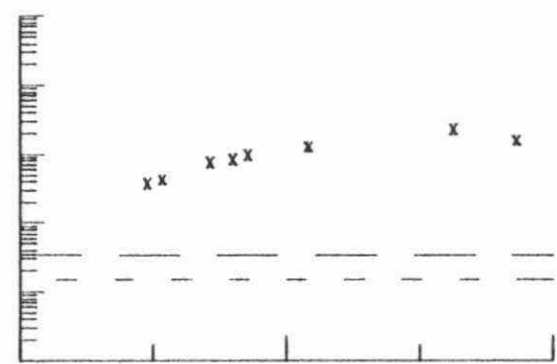
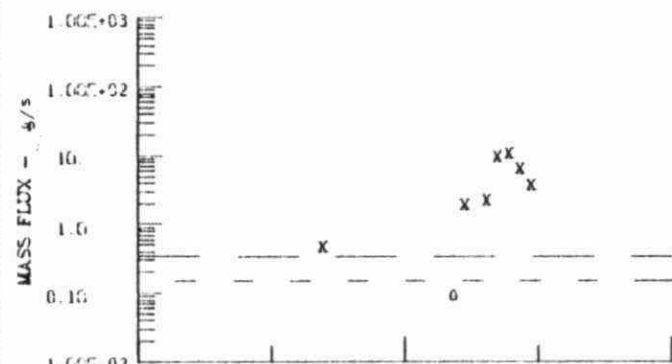
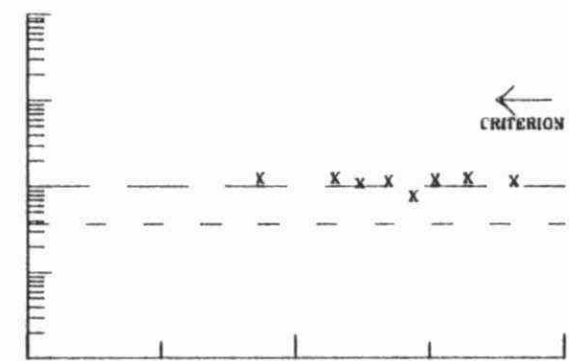
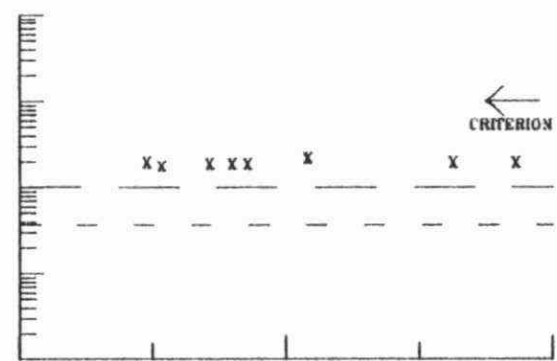
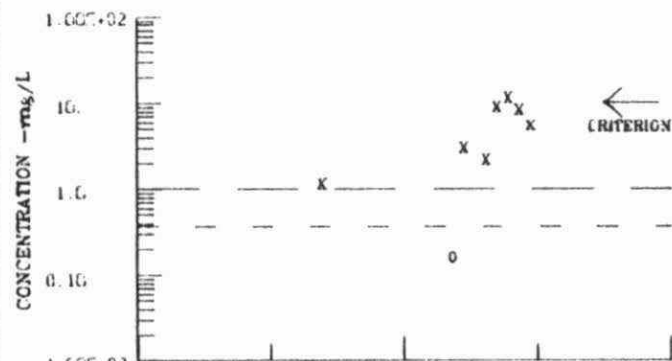
EVENT 2 - HOURS

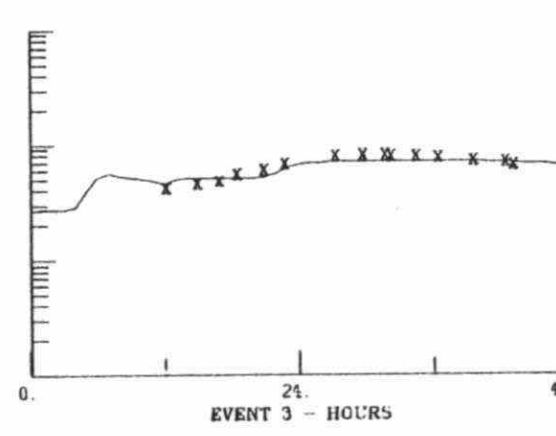
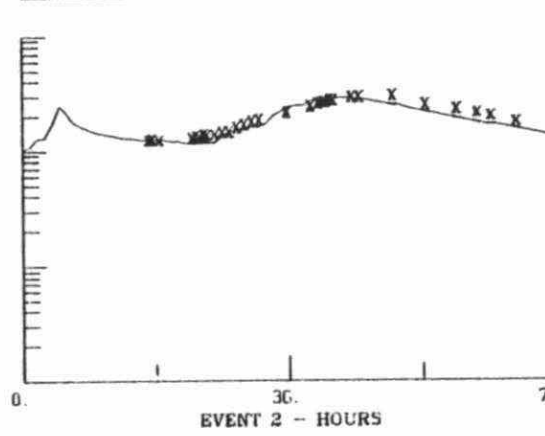
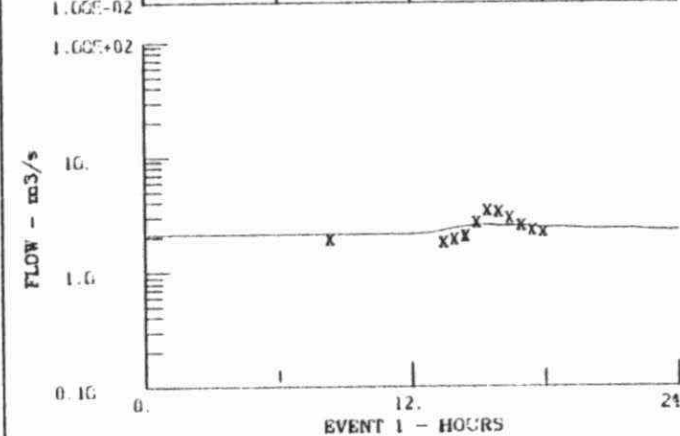
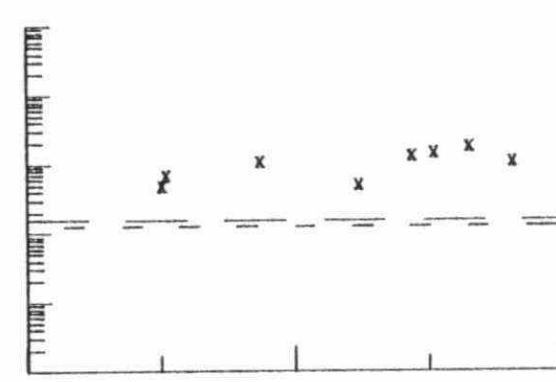
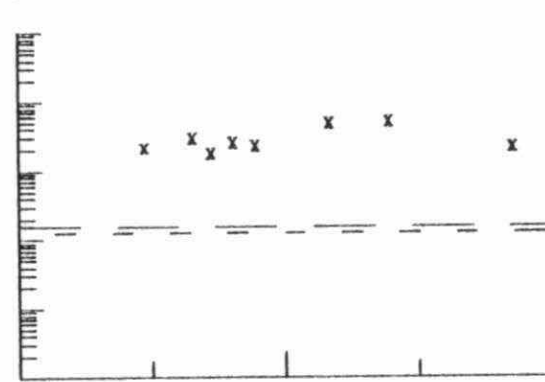
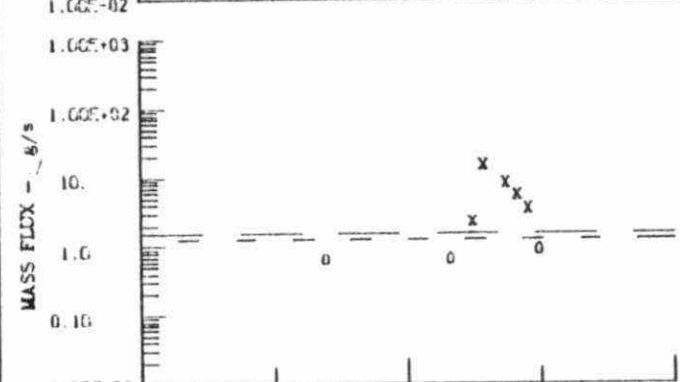
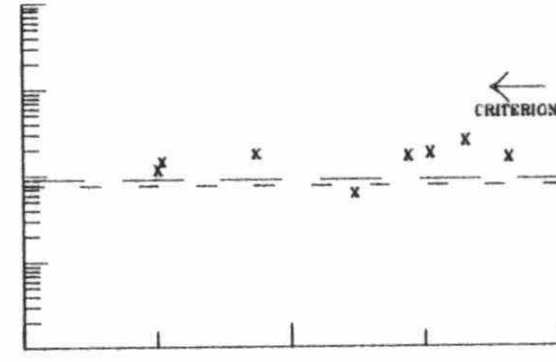
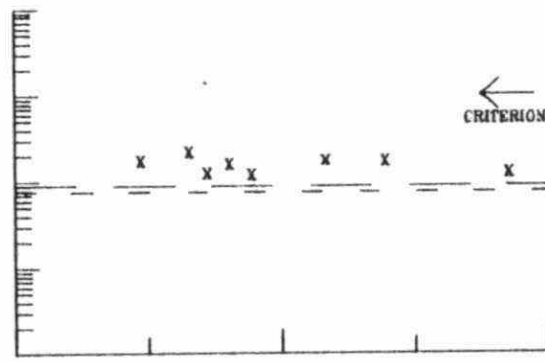
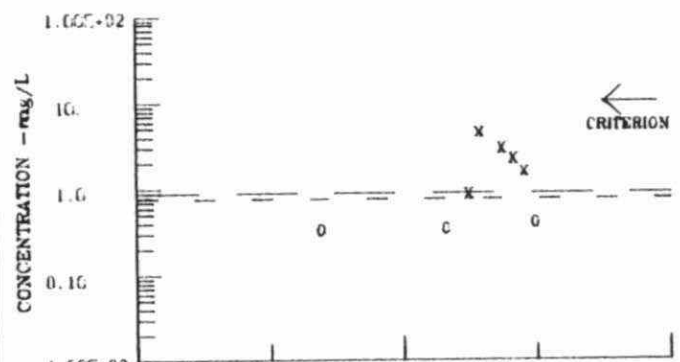
EVENT 3 - HOURS

ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - BOD5

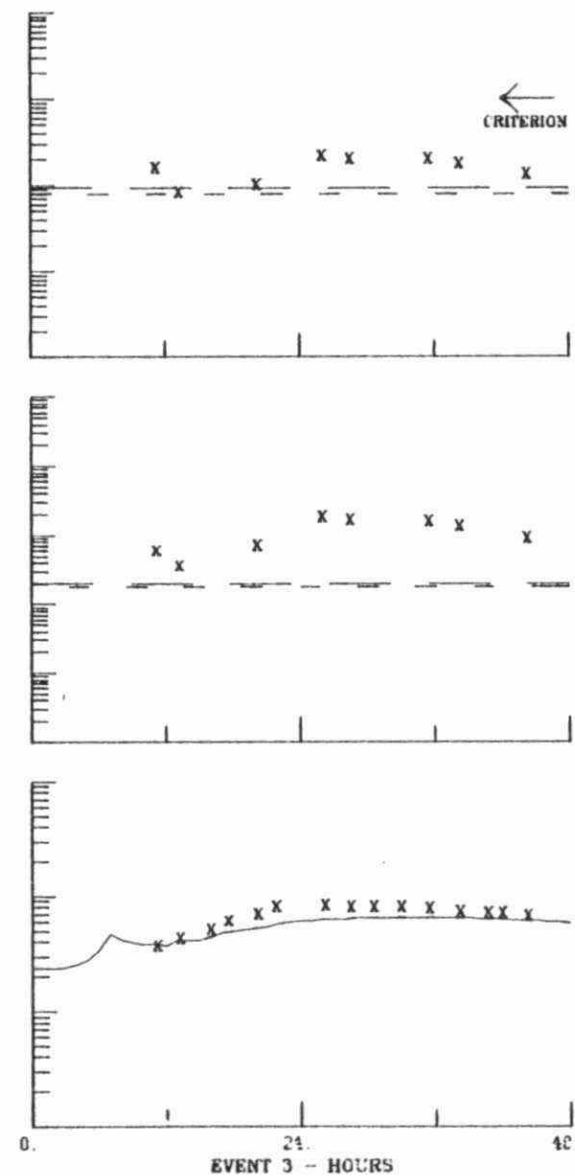
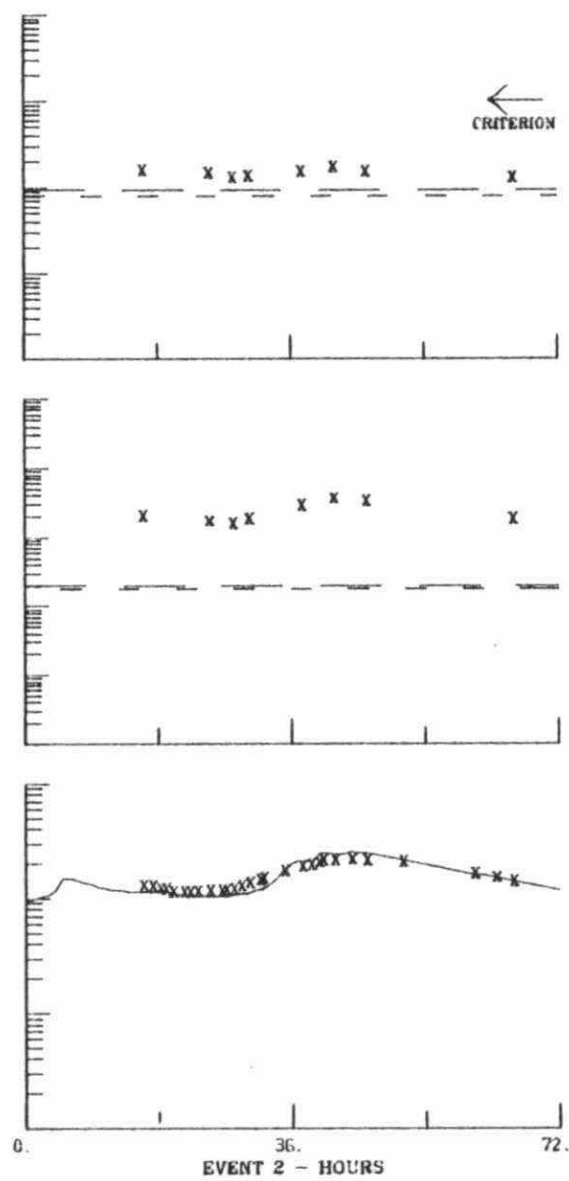
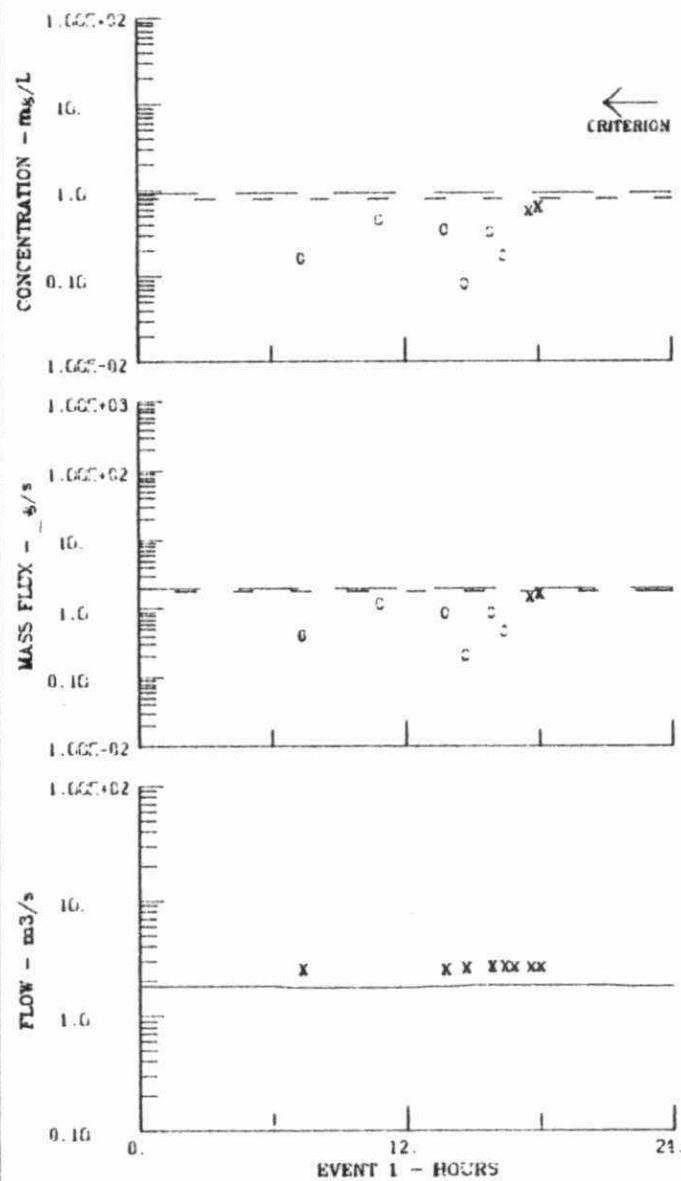


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - BOD5

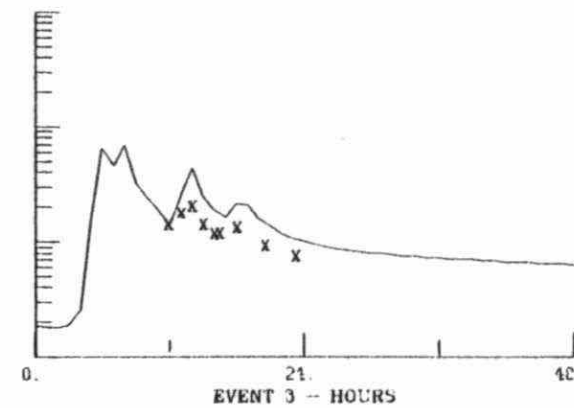
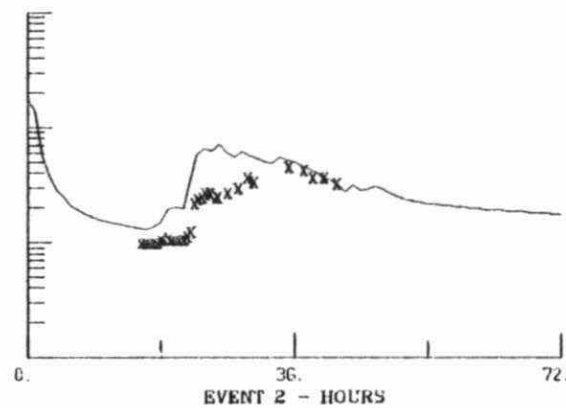
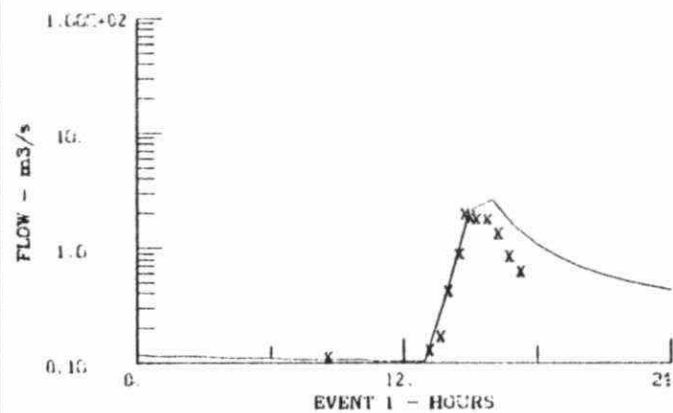
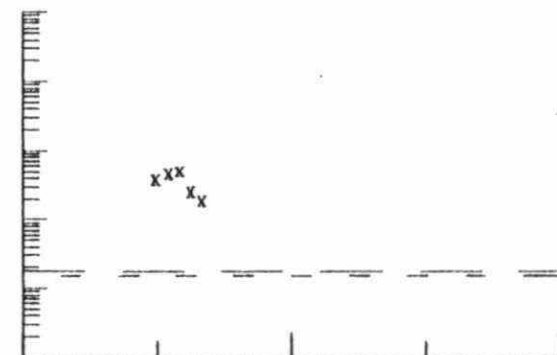
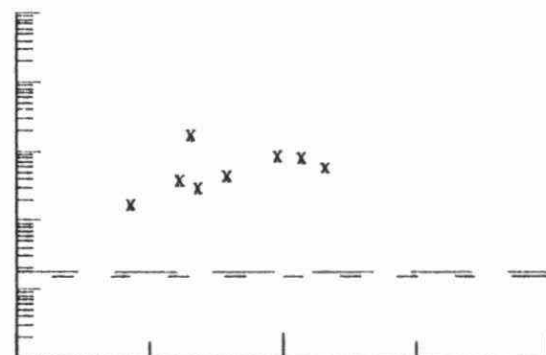
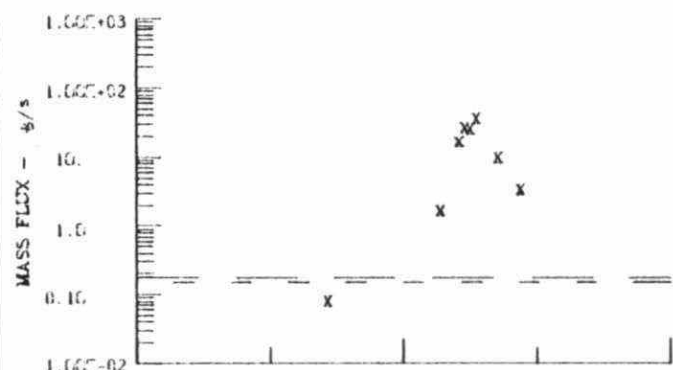
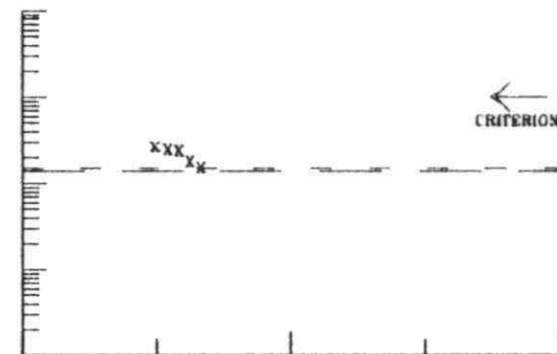
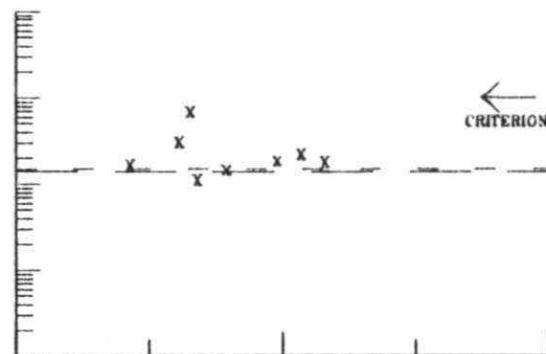
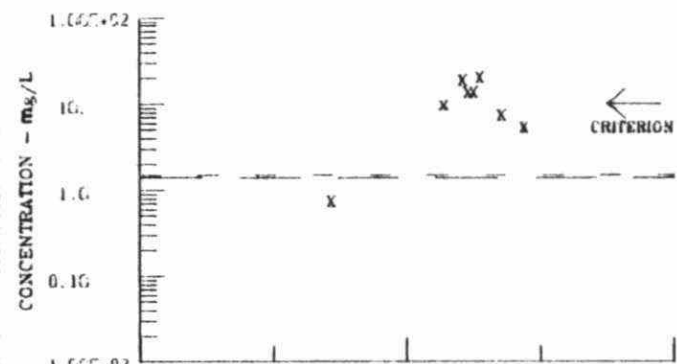




ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - BOD5

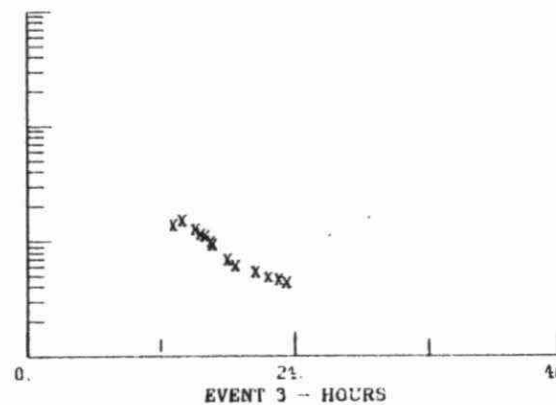
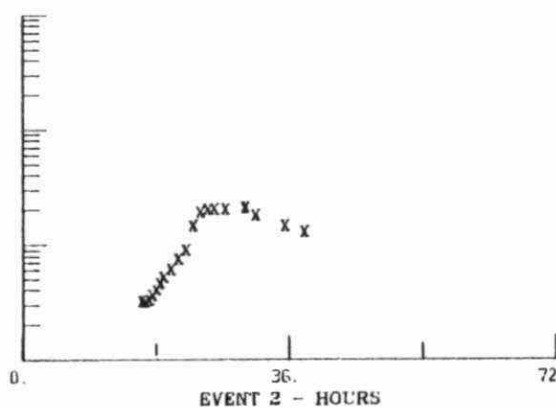
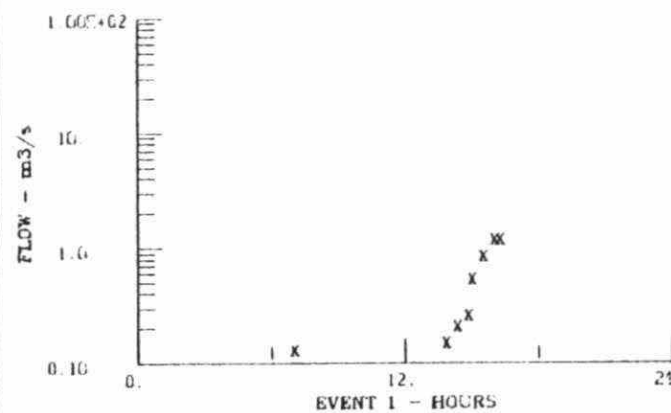
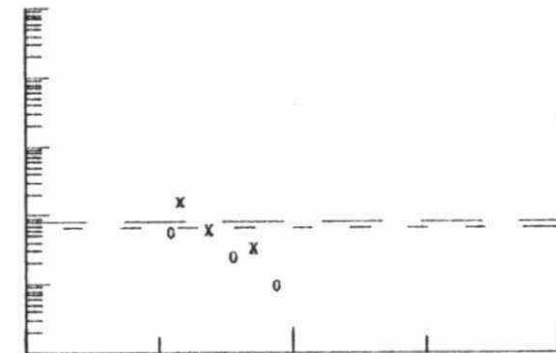
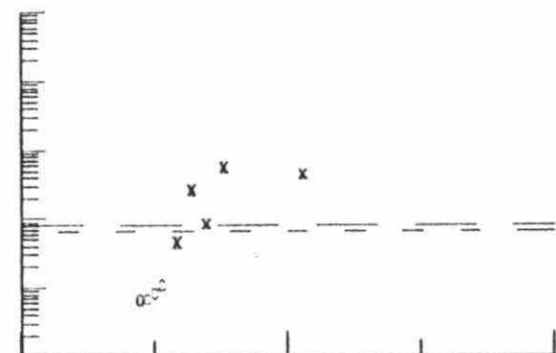
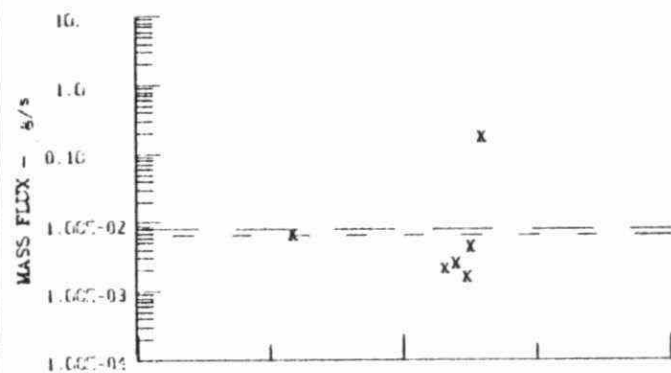
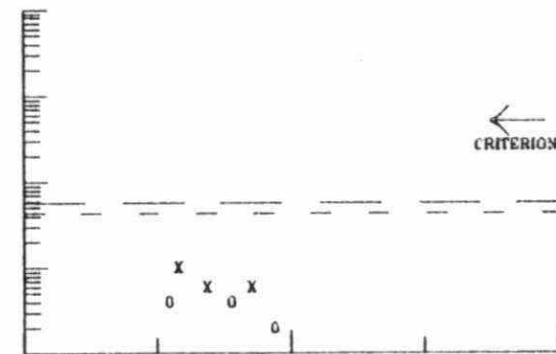
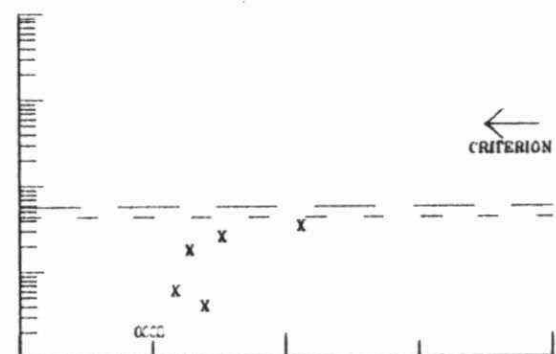
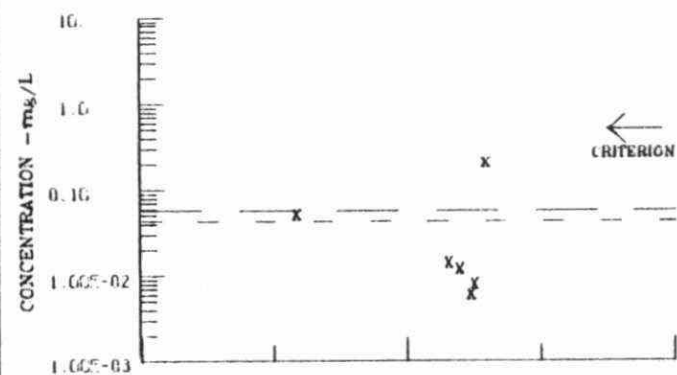


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - BOD5

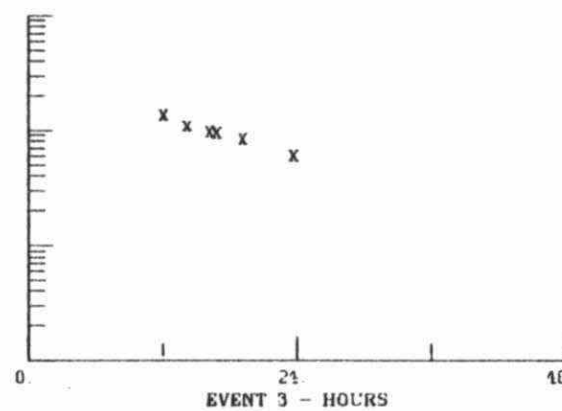
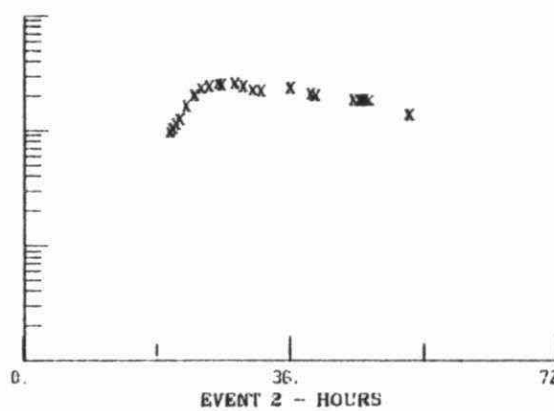
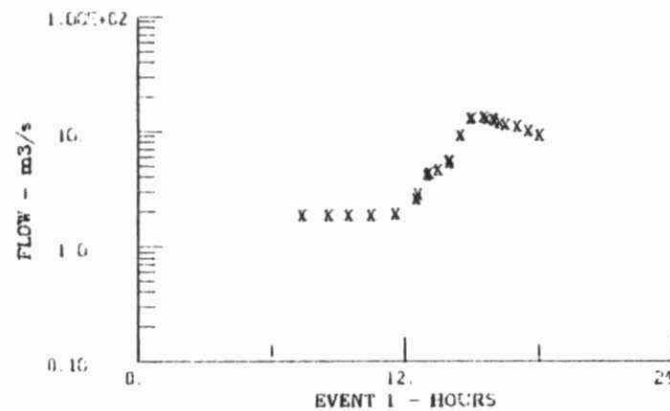
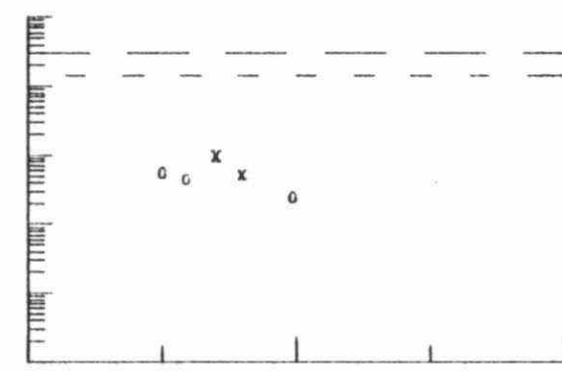
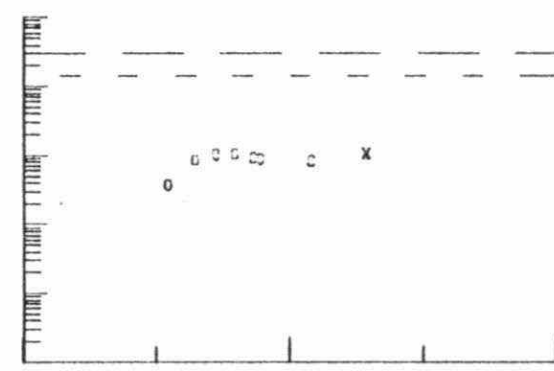
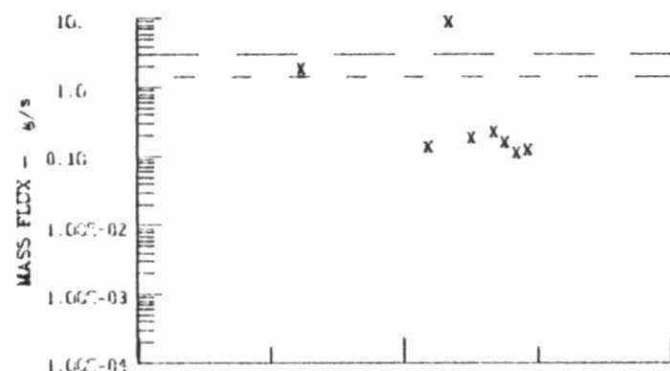
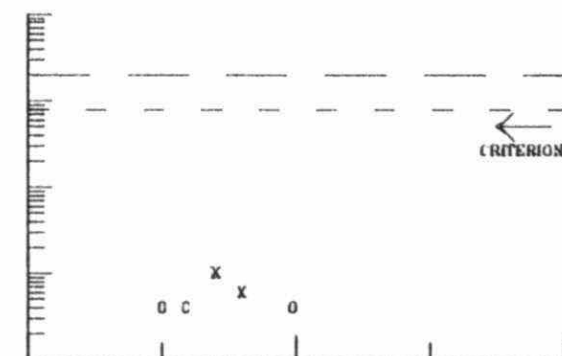
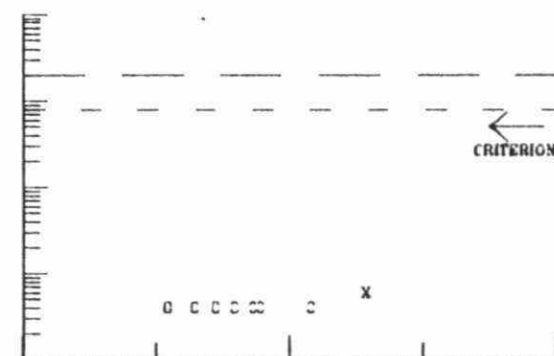
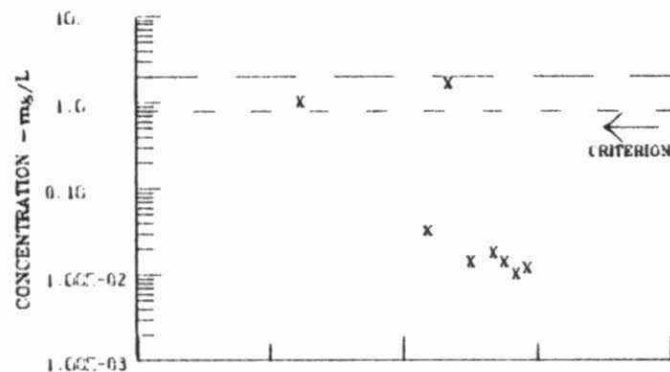


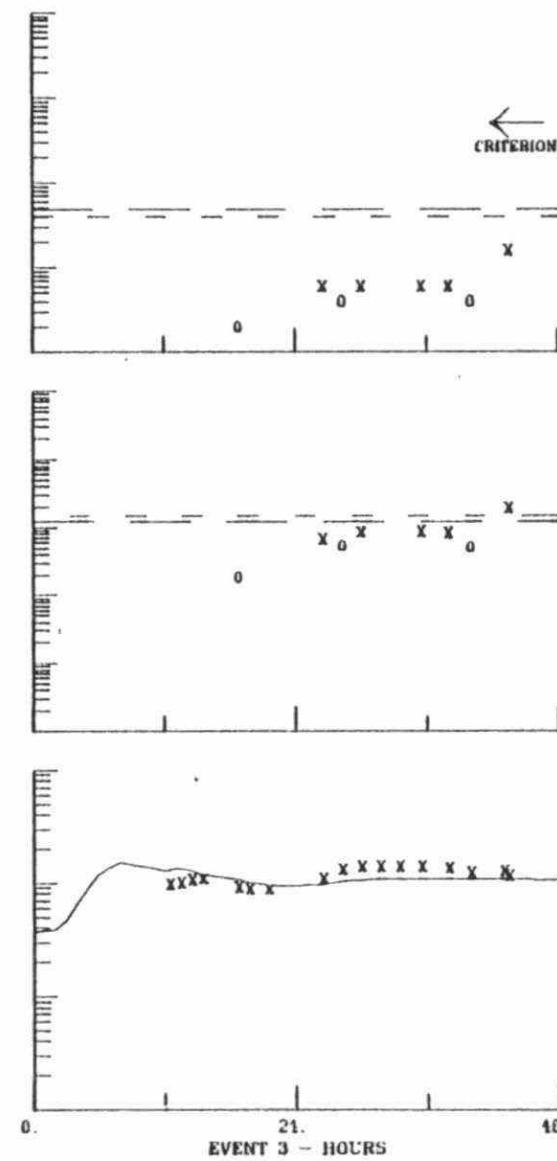
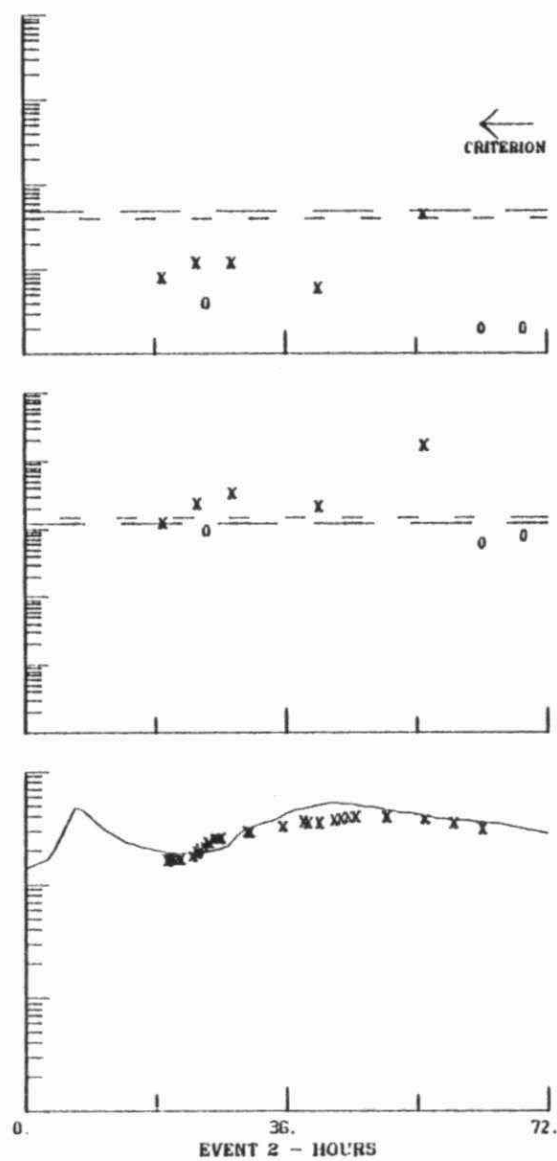
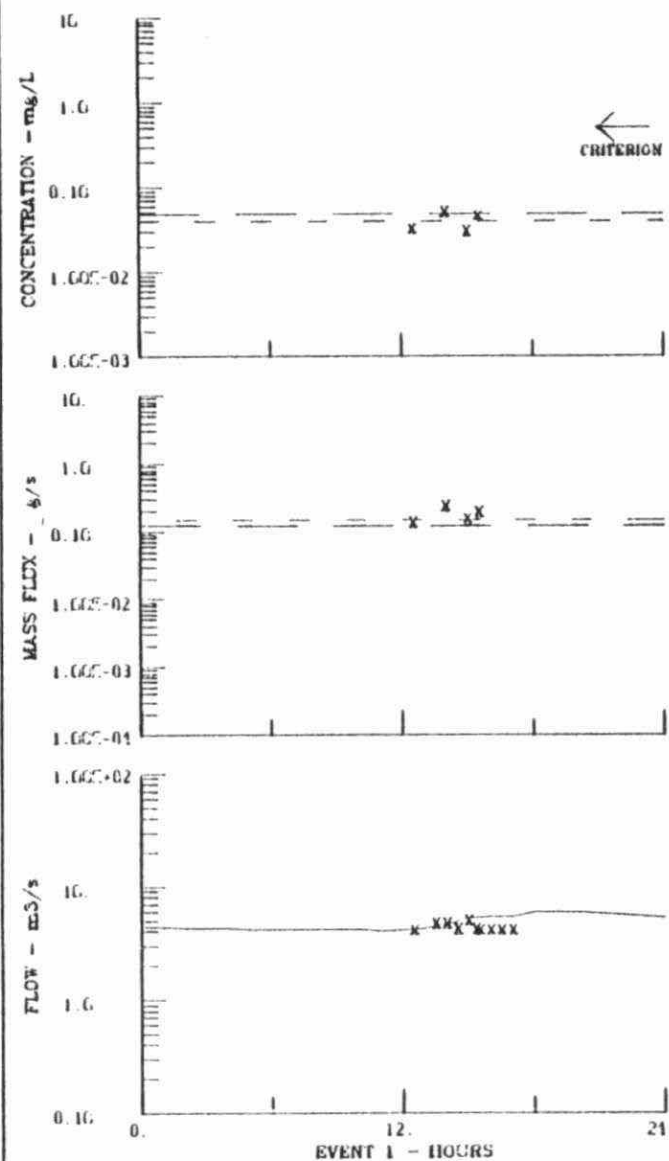
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - BOD5

NH₄

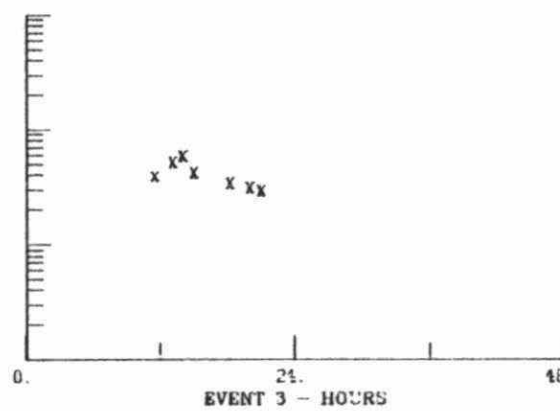
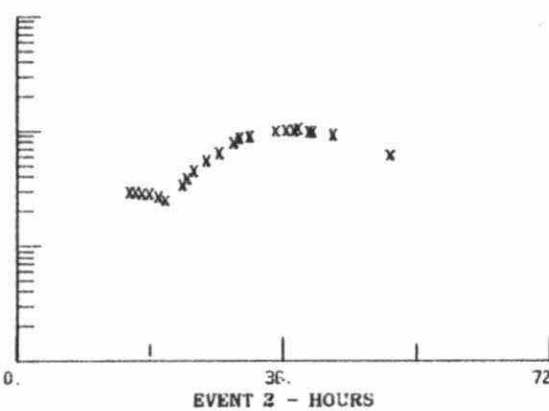
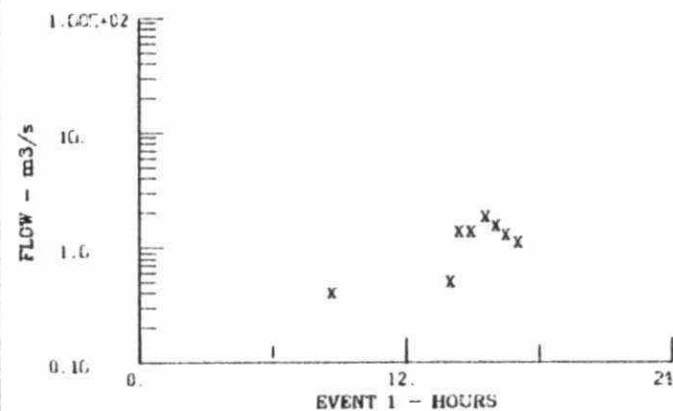
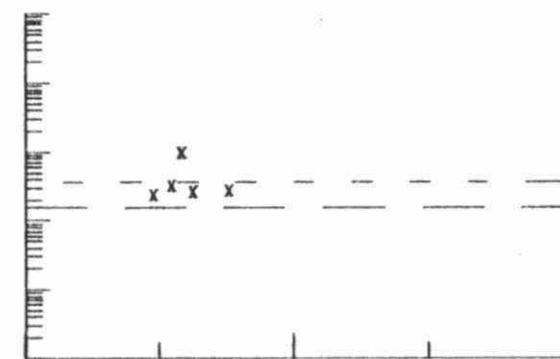
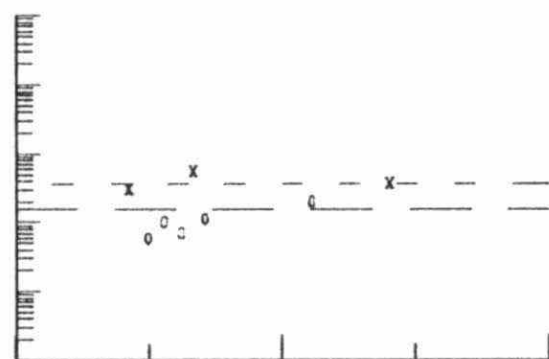
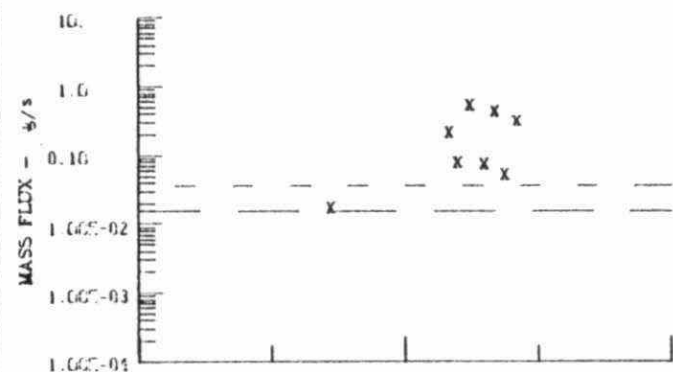
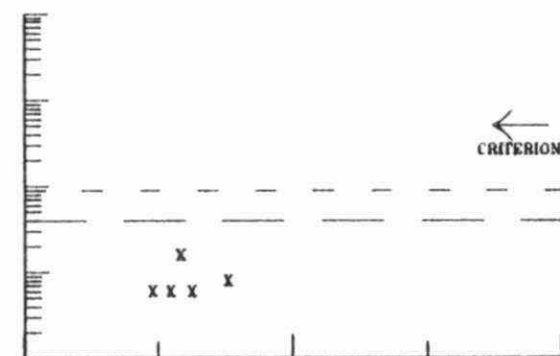
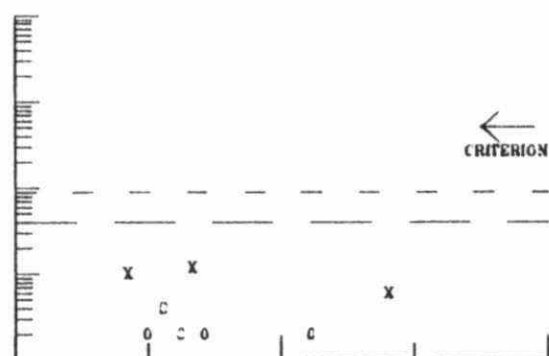
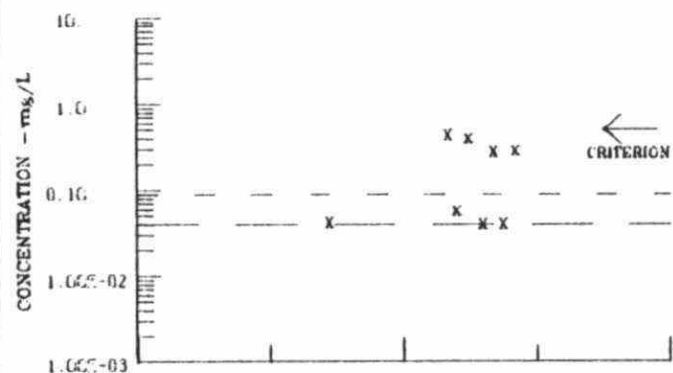


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - NH4

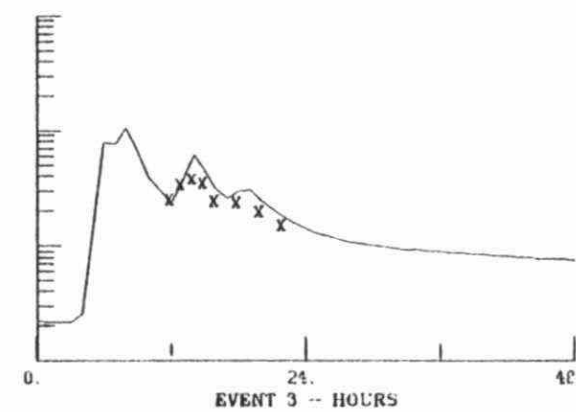
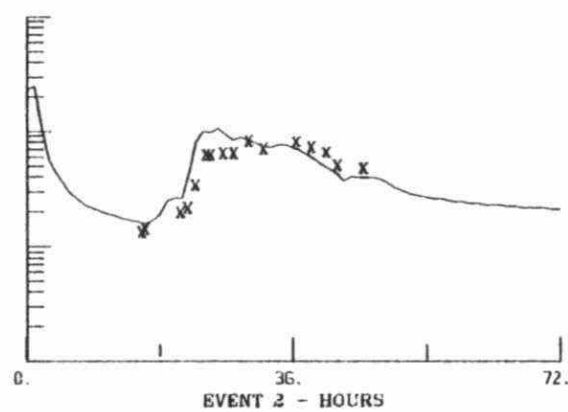
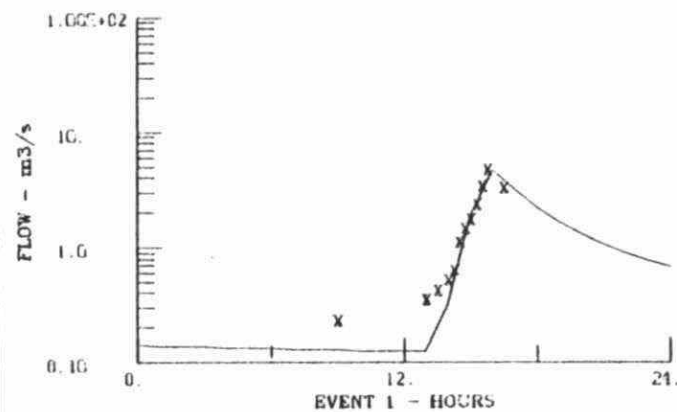
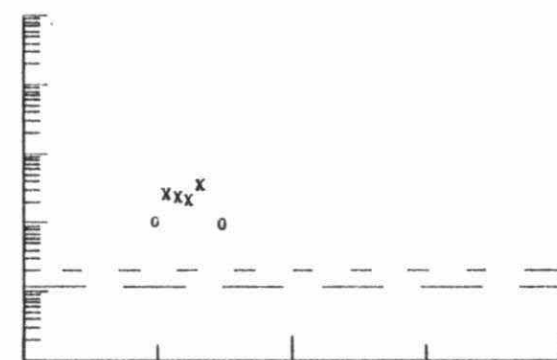
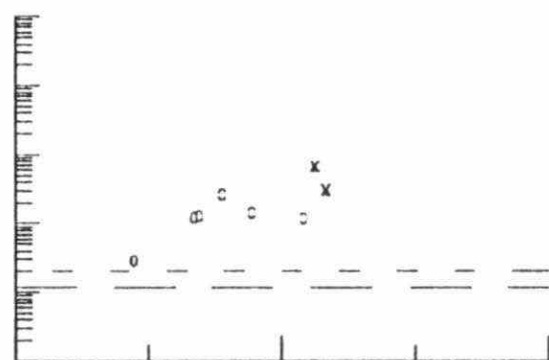
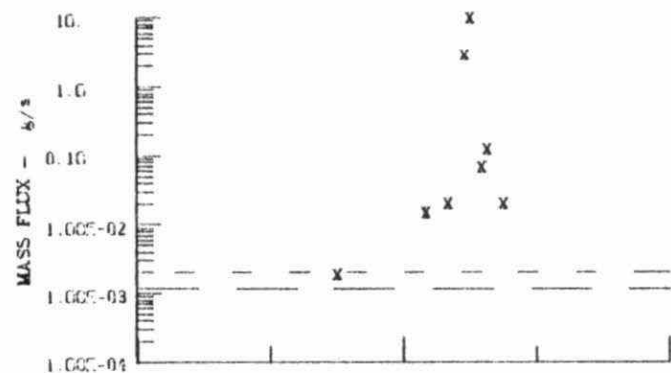
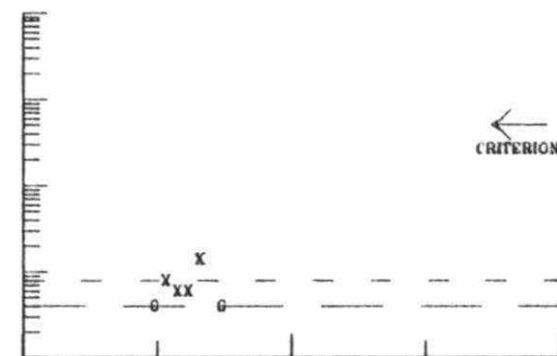
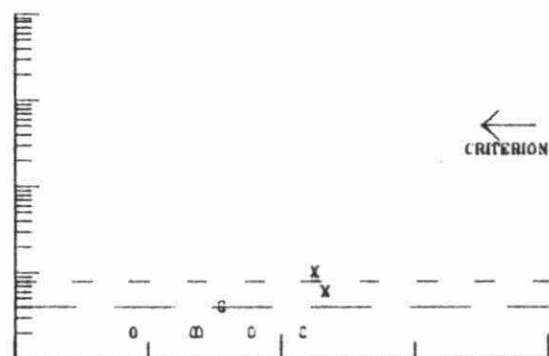
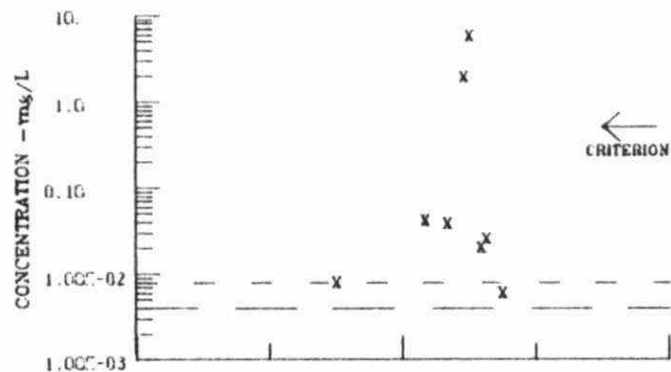




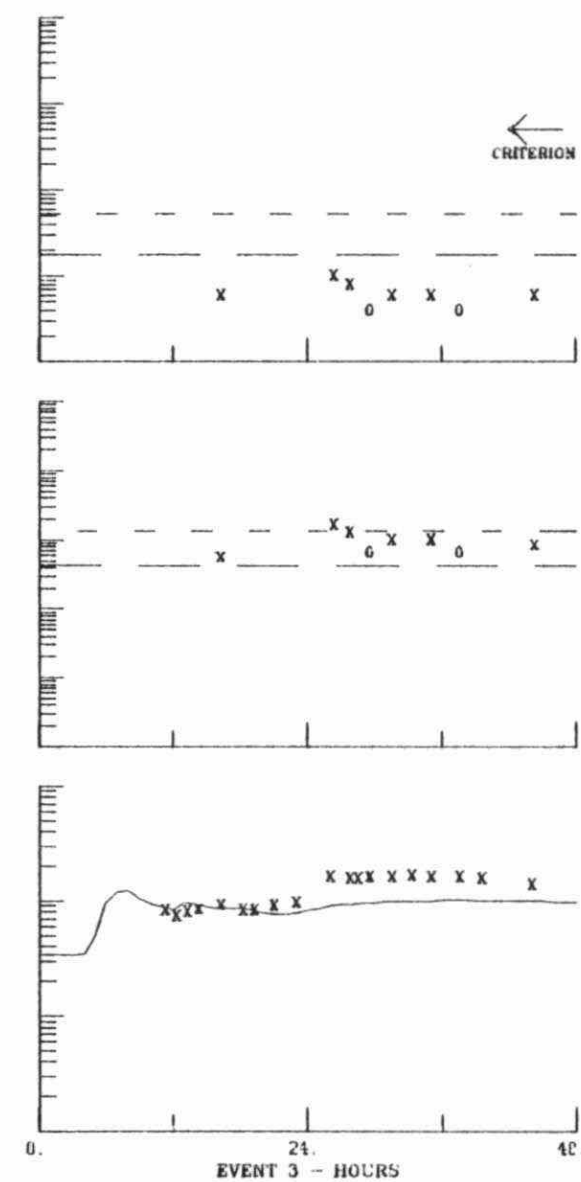
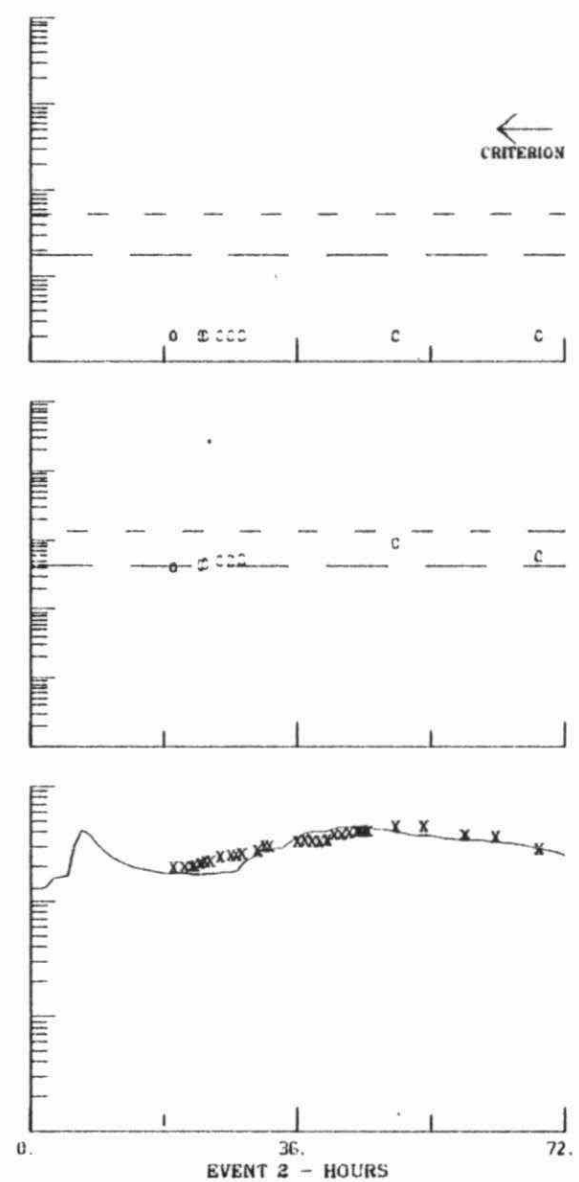
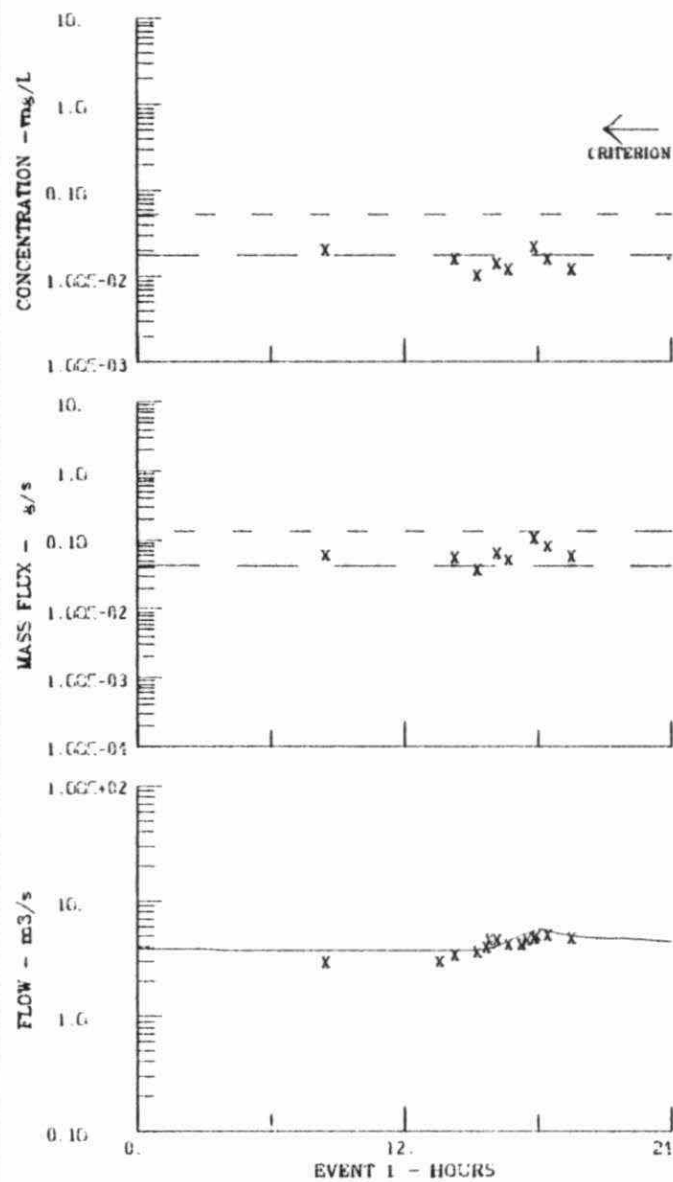
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - NH4

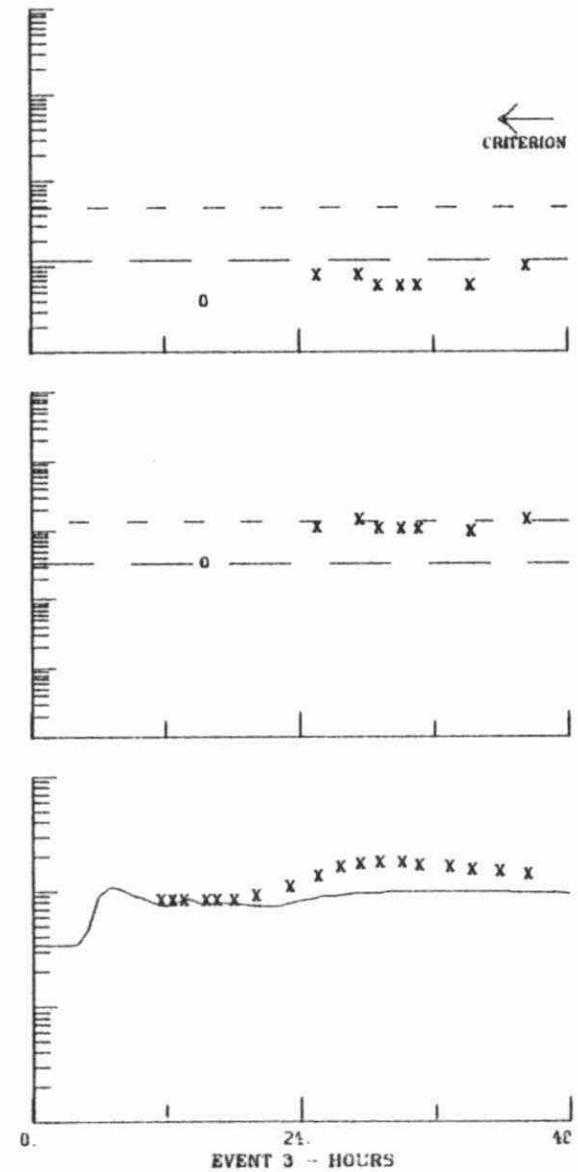
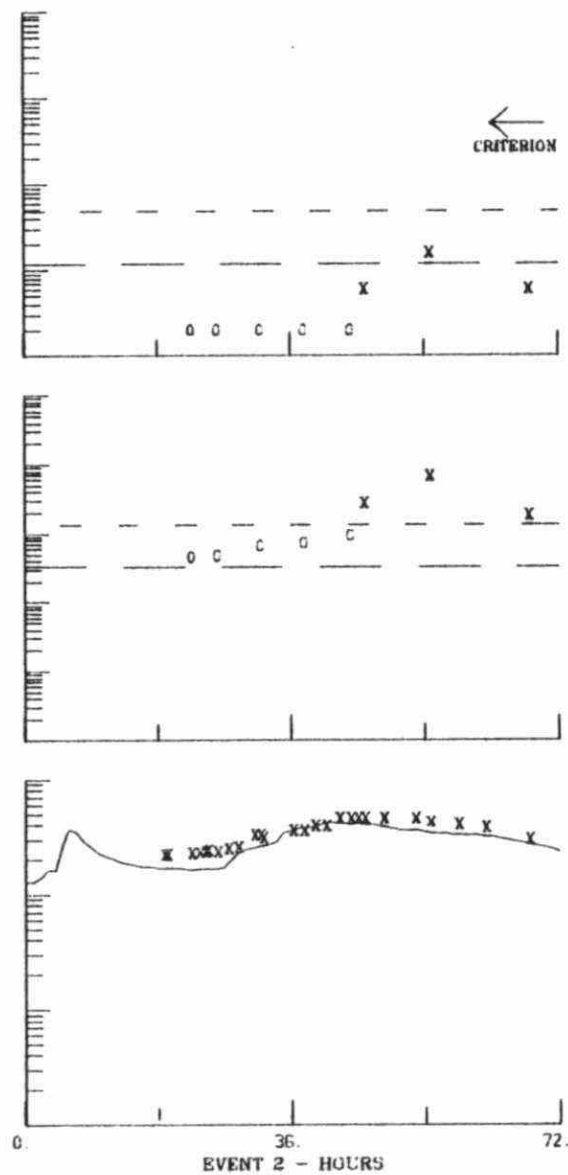
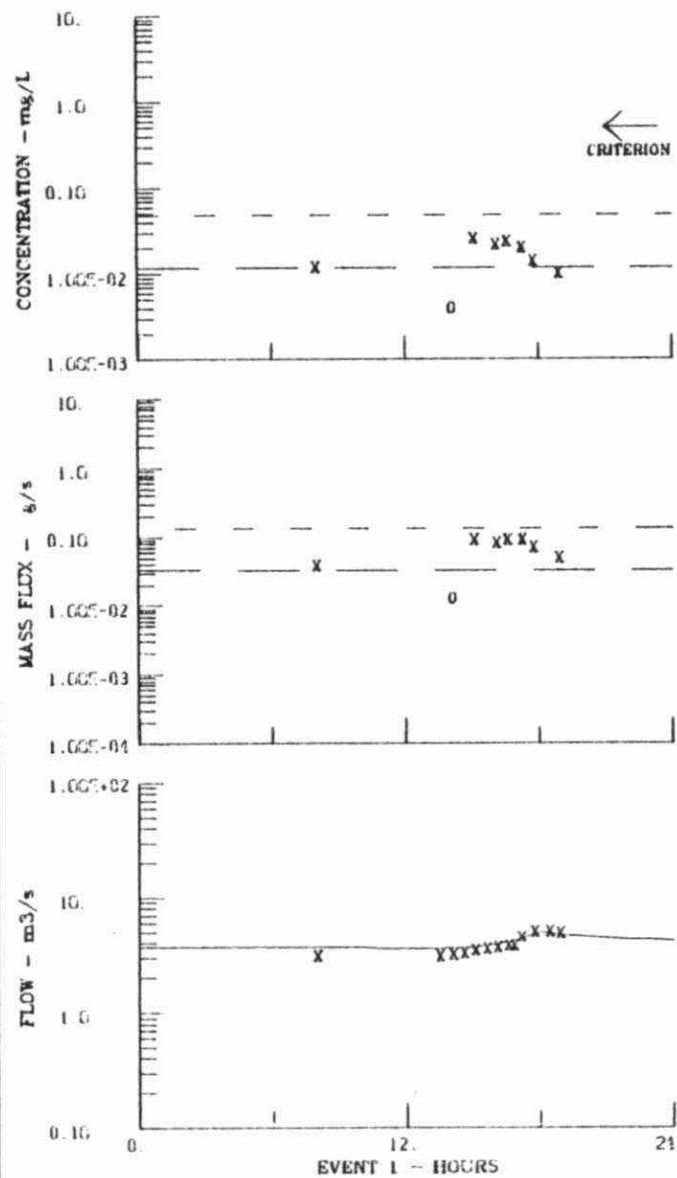


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - NH4

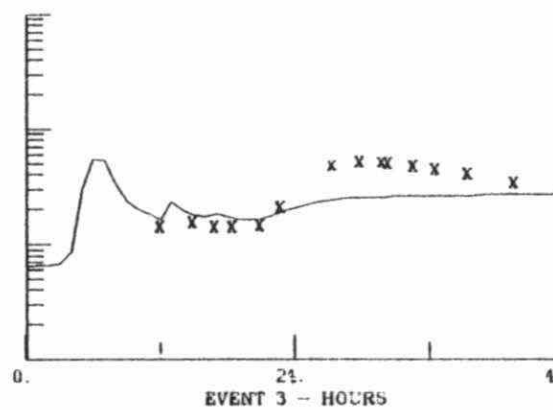
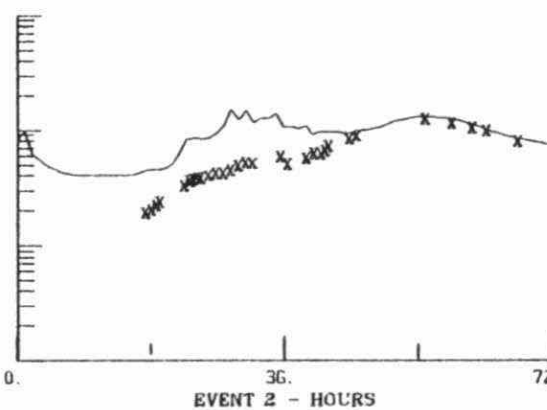
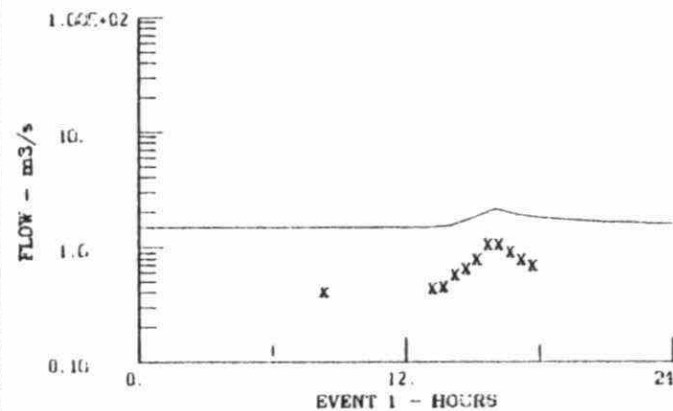
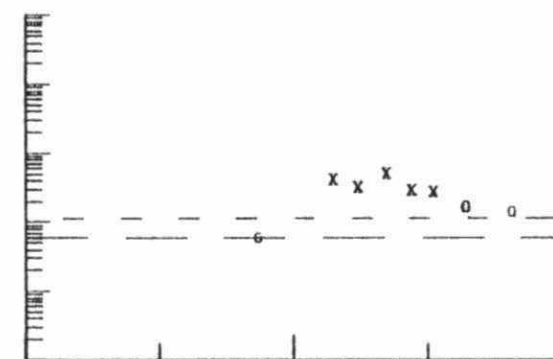
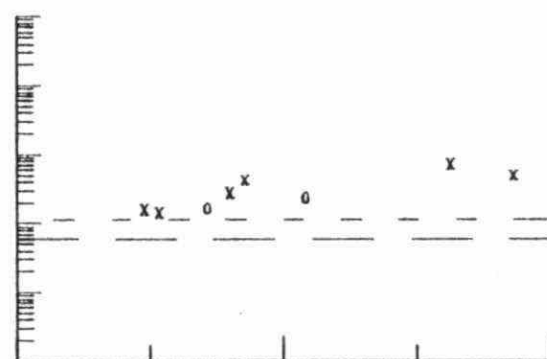
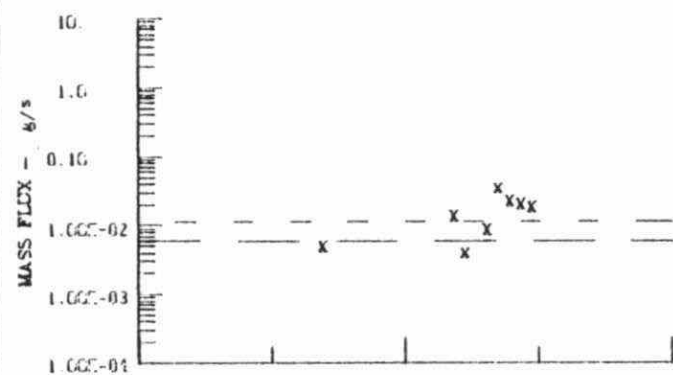
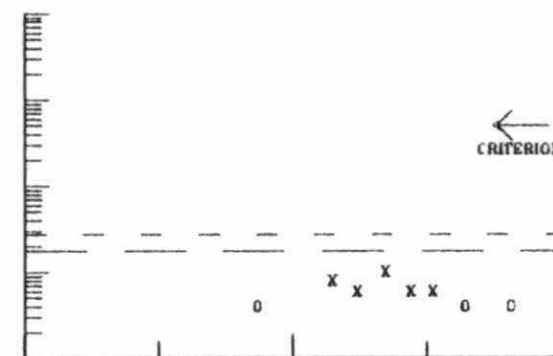
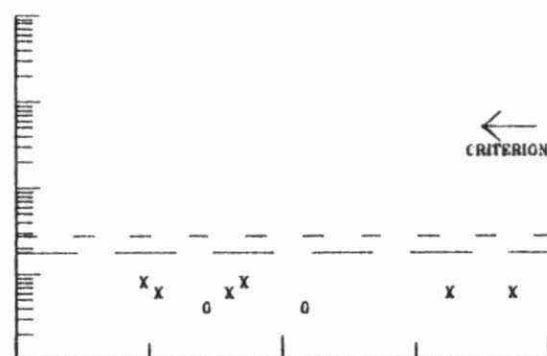
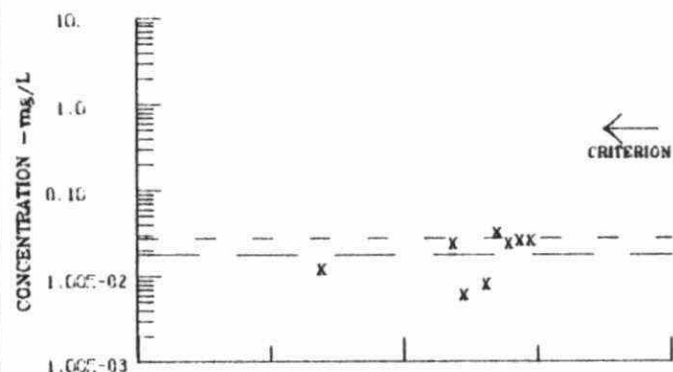


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - NH4

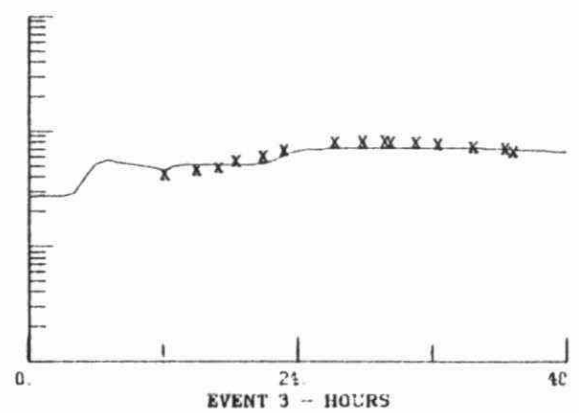
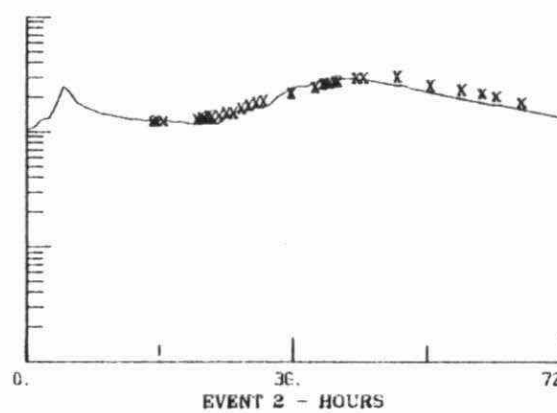
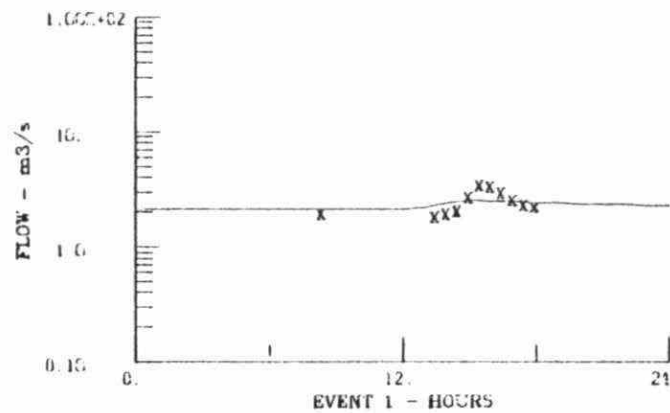
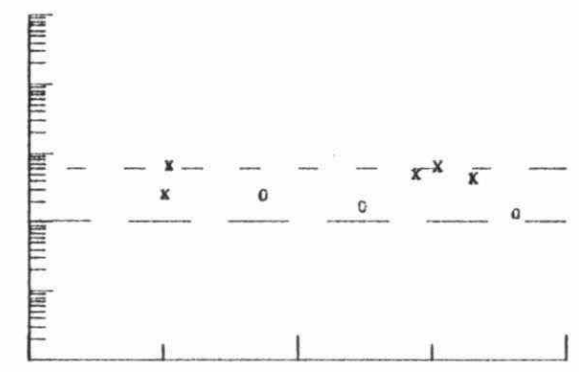
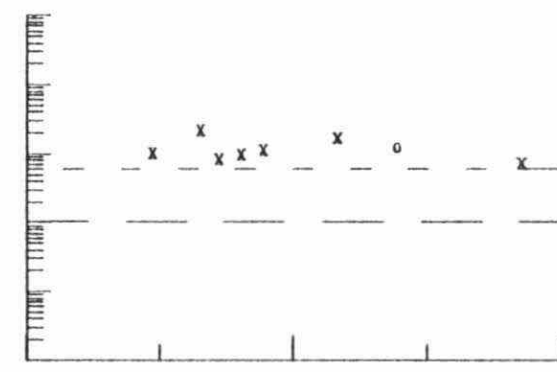
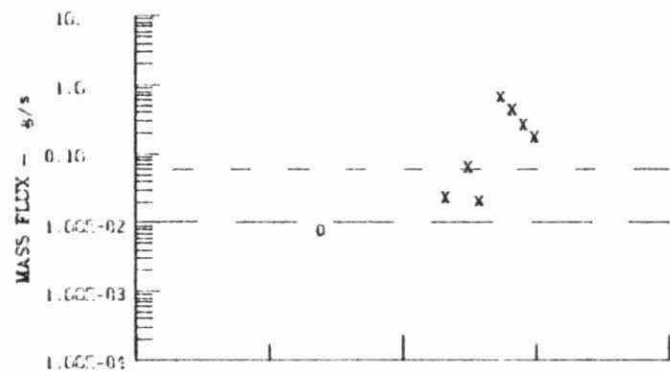
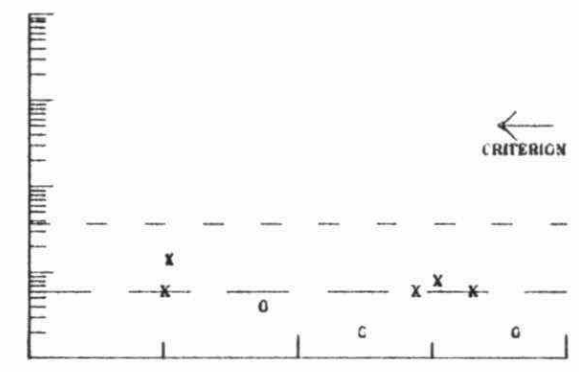
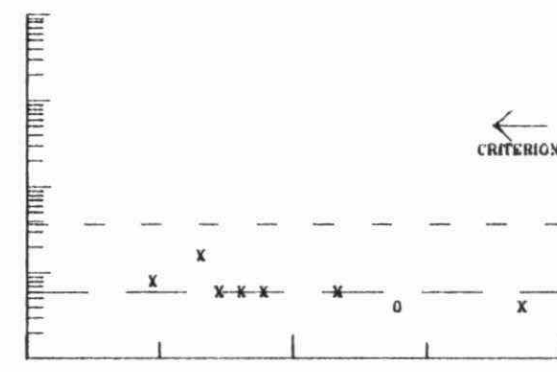
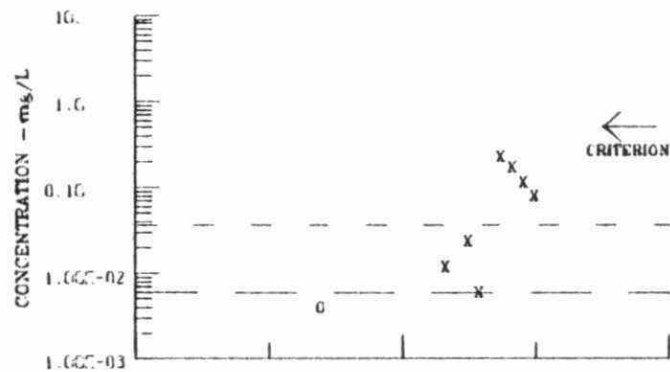


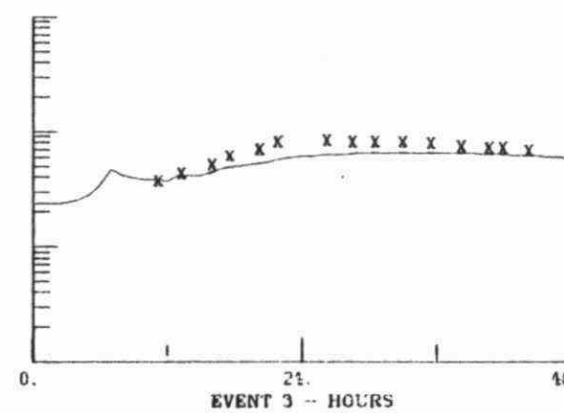
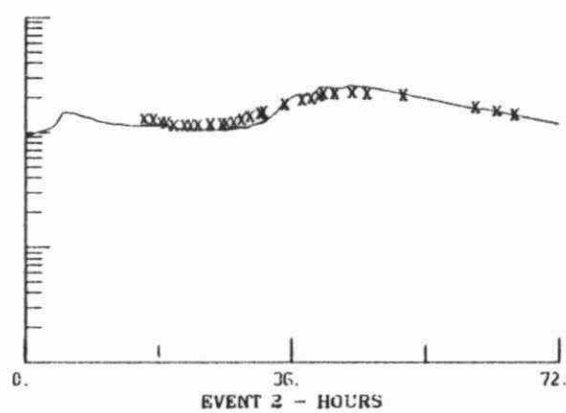
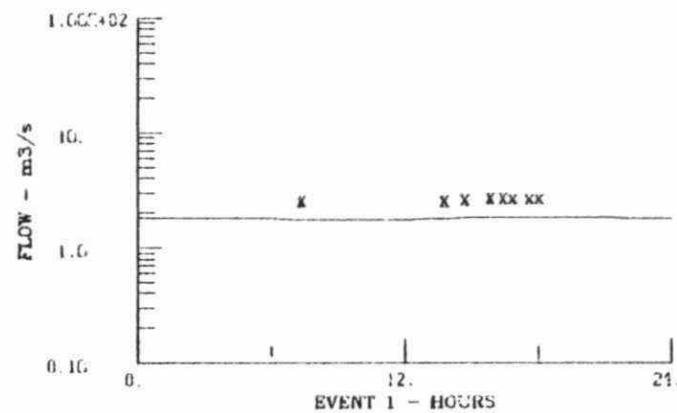
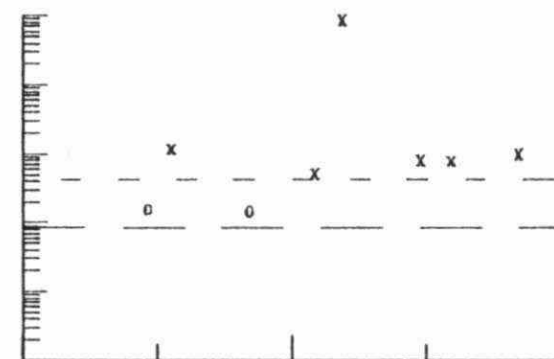
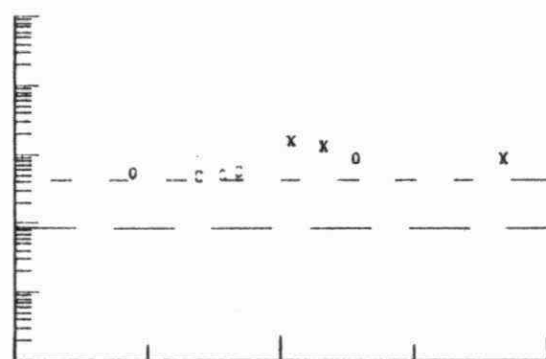
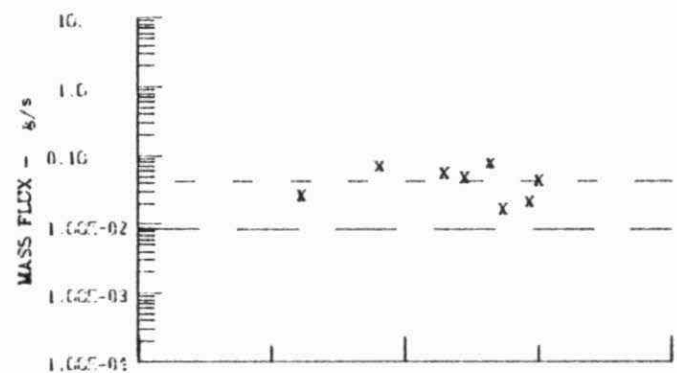
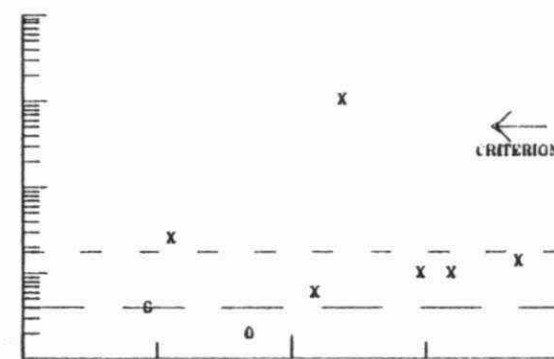
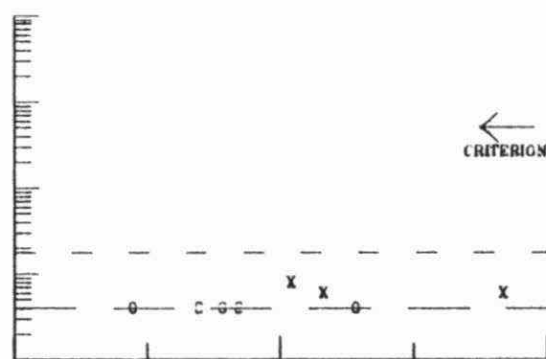
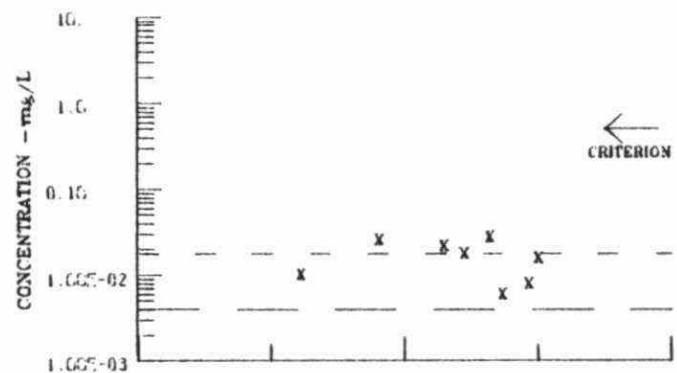


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - NH4

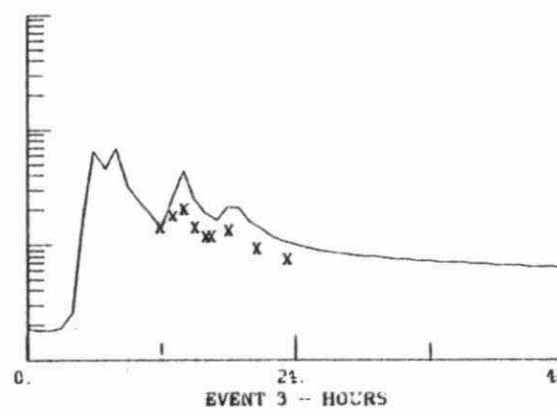
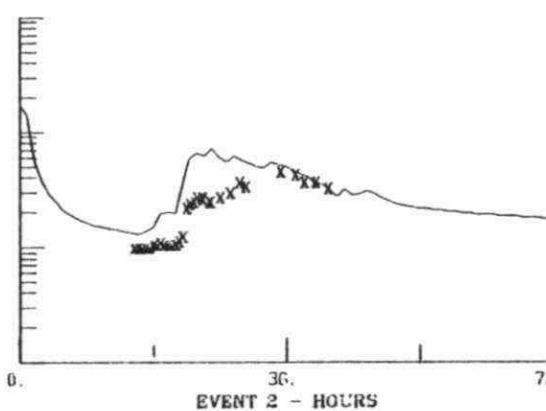
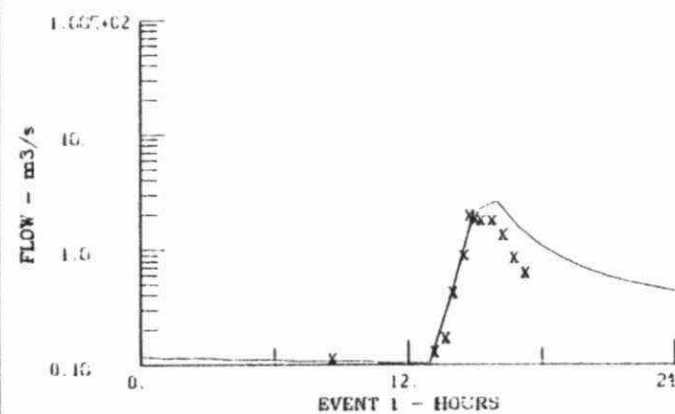
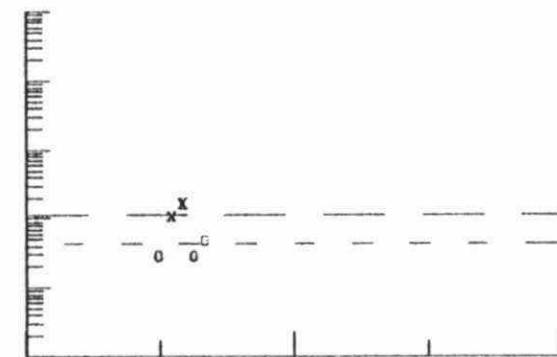
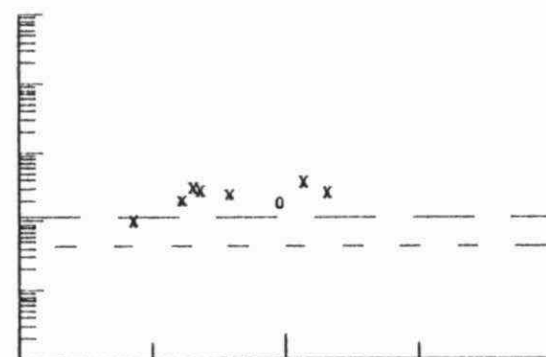
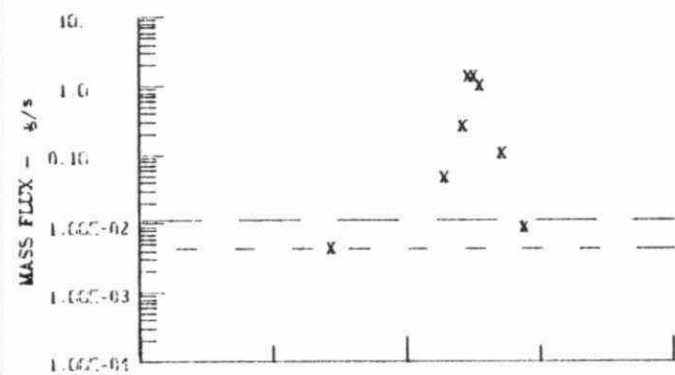
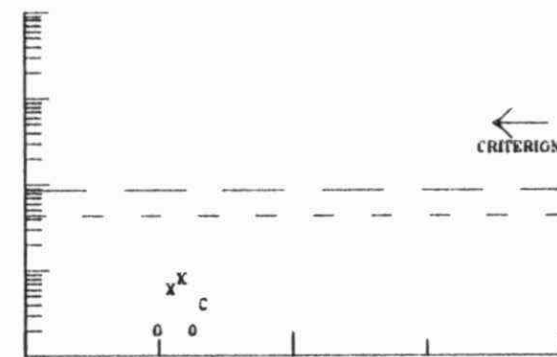
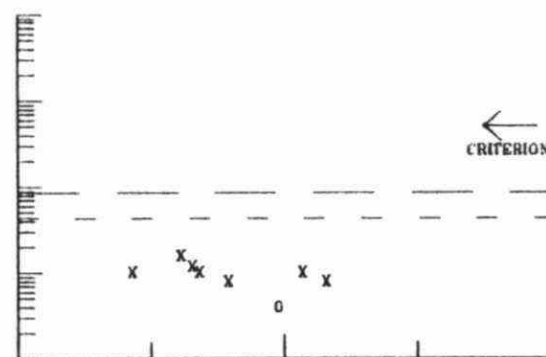
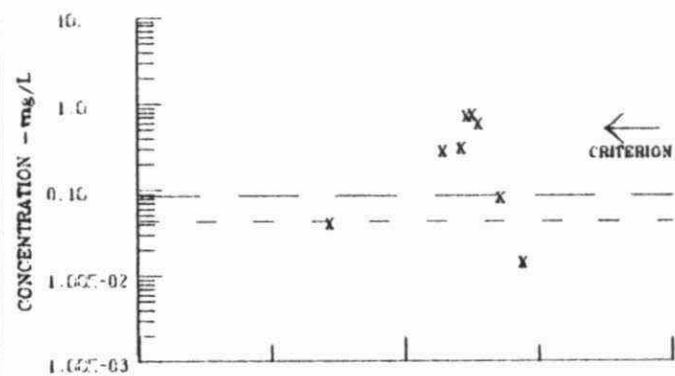


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - NH4



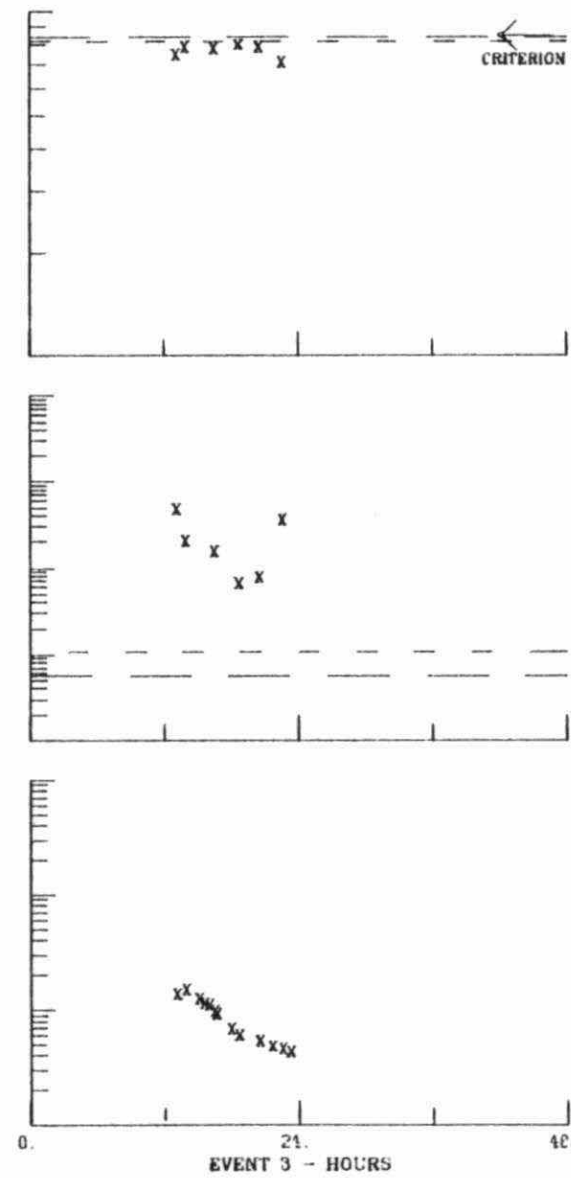
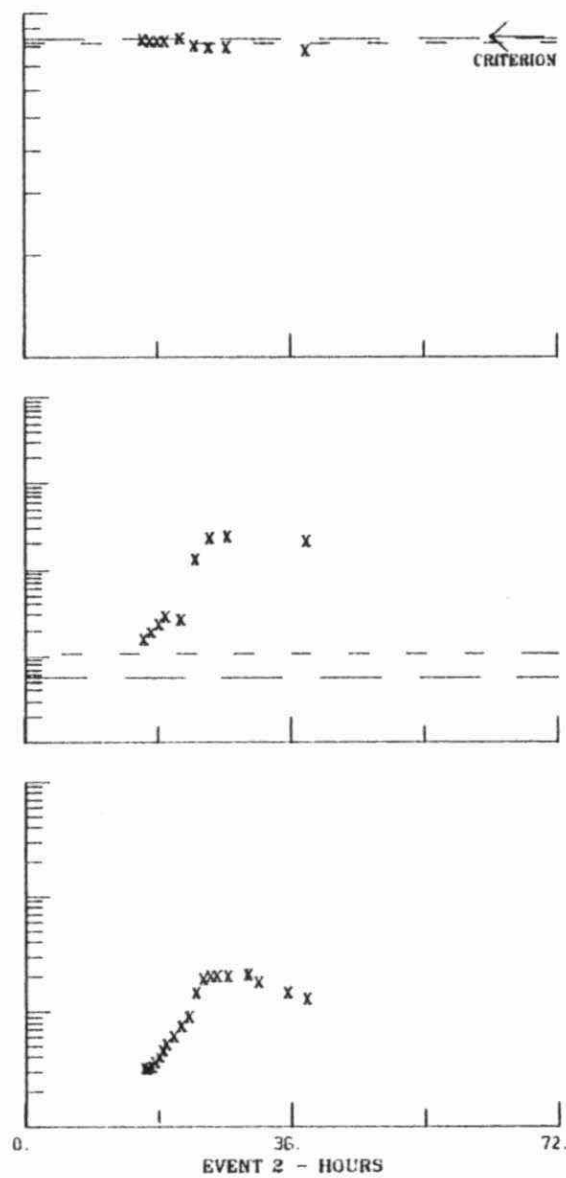
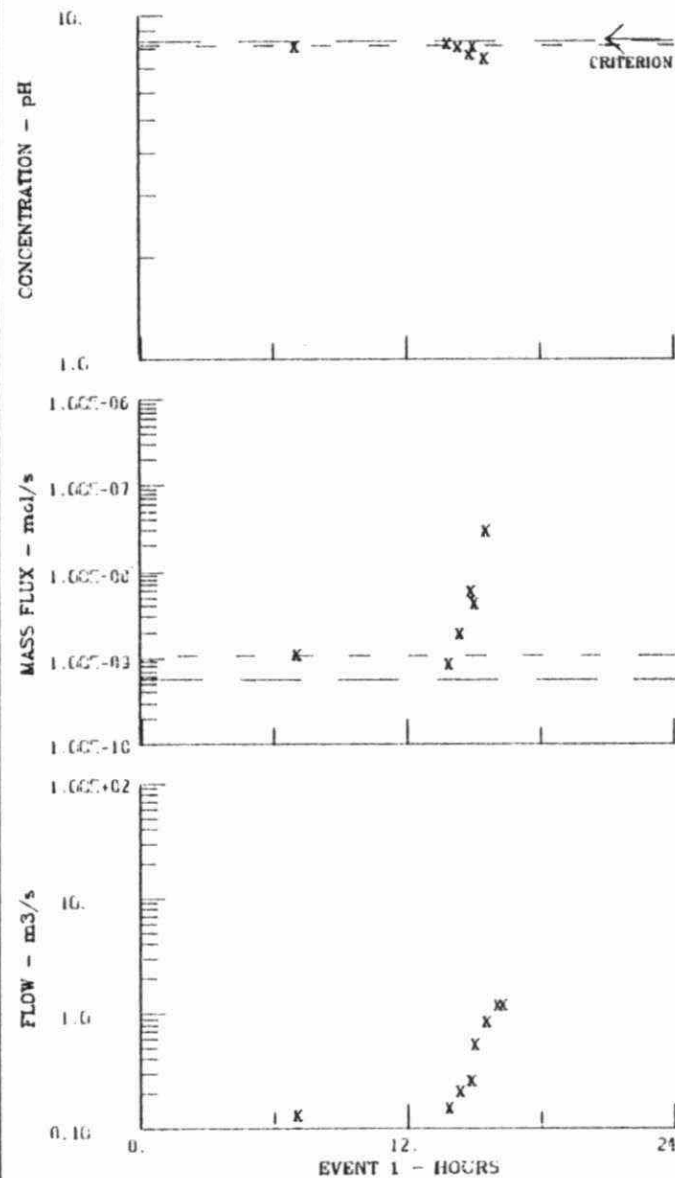


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - NH4

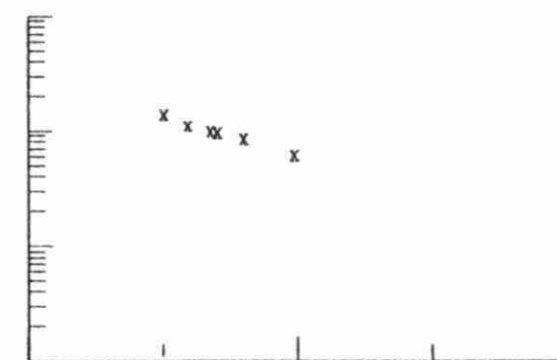
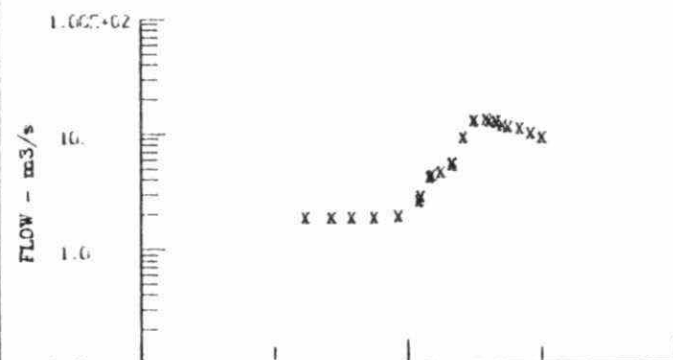
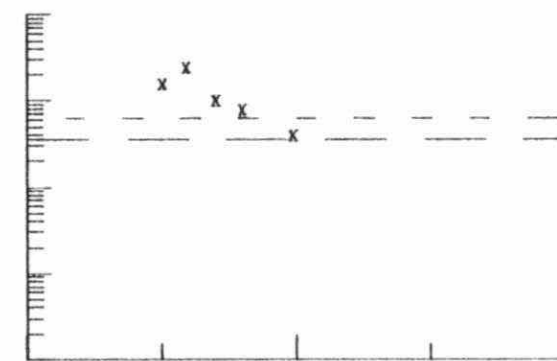
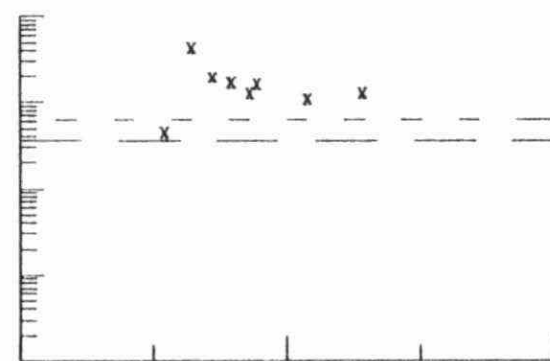
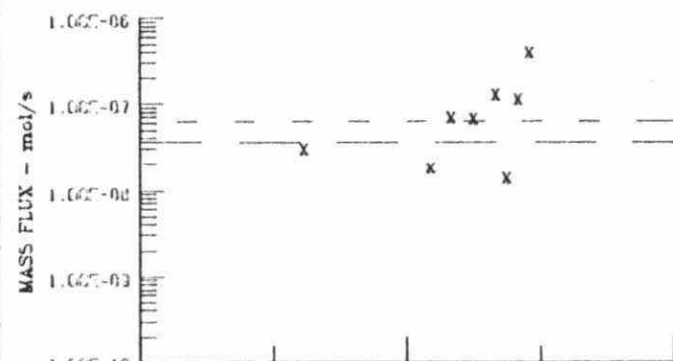
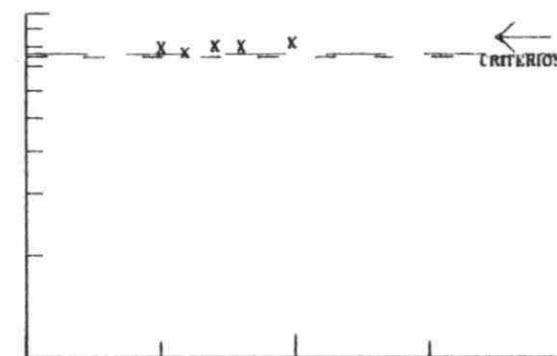
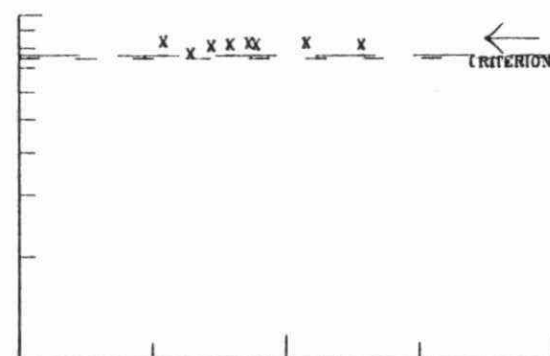
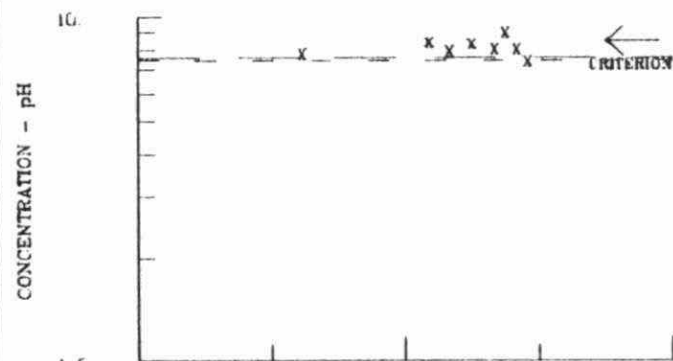


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - NH4

pH



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - pH

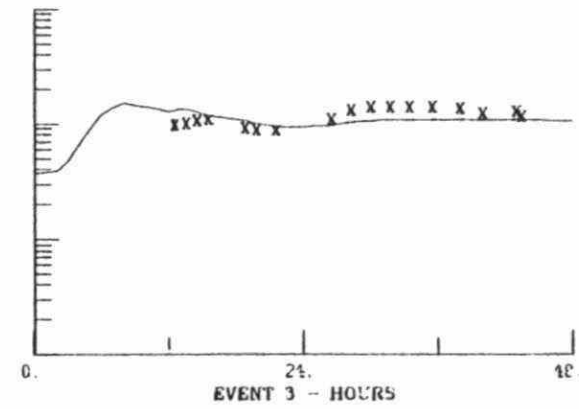
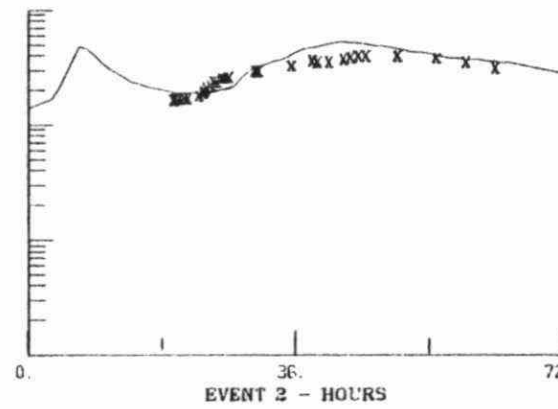
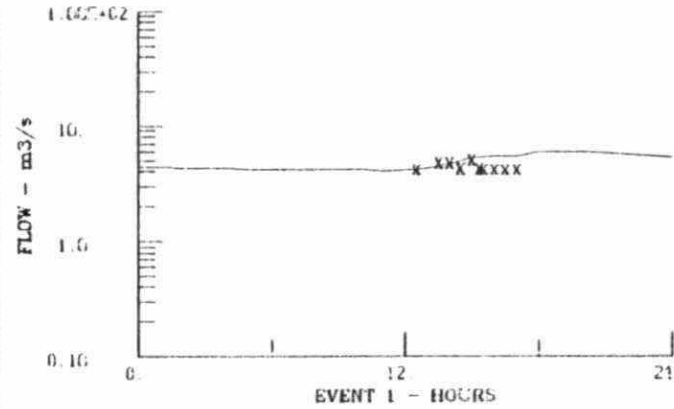
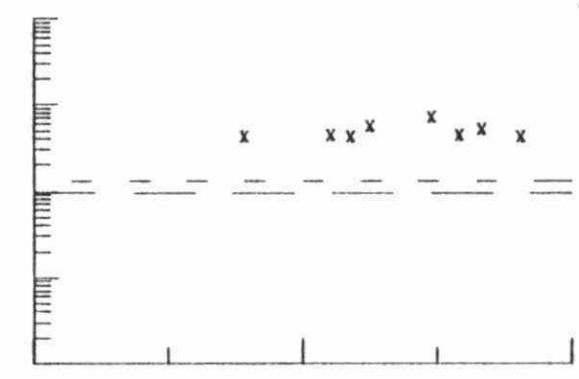
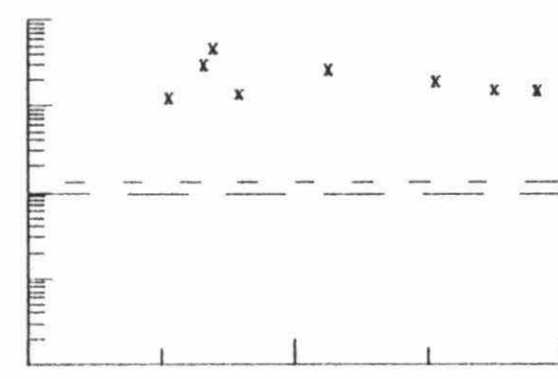
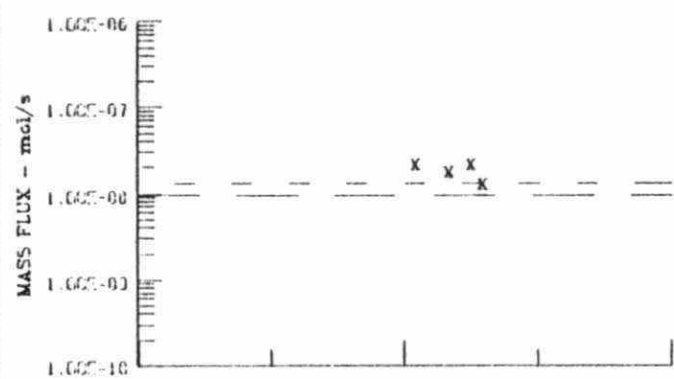
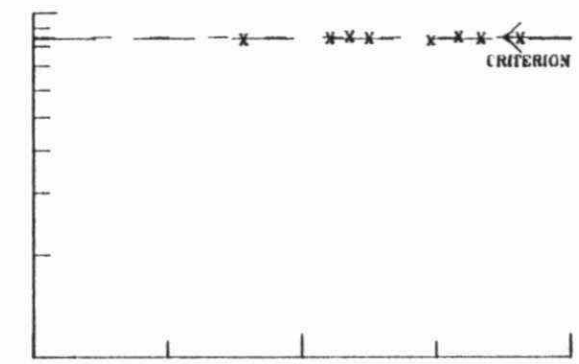
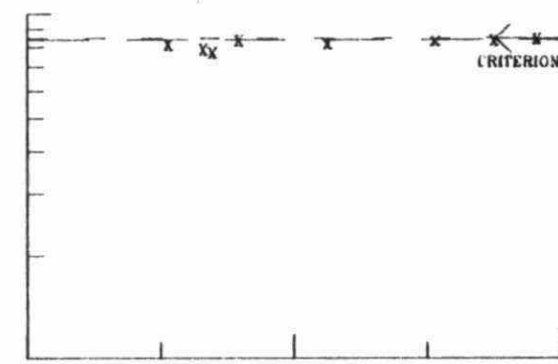
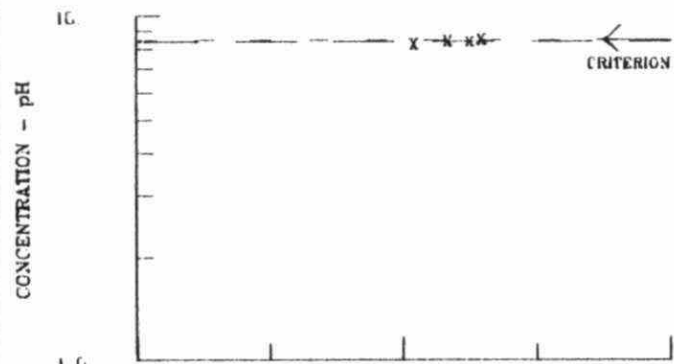


EVENT 1 - HOURS

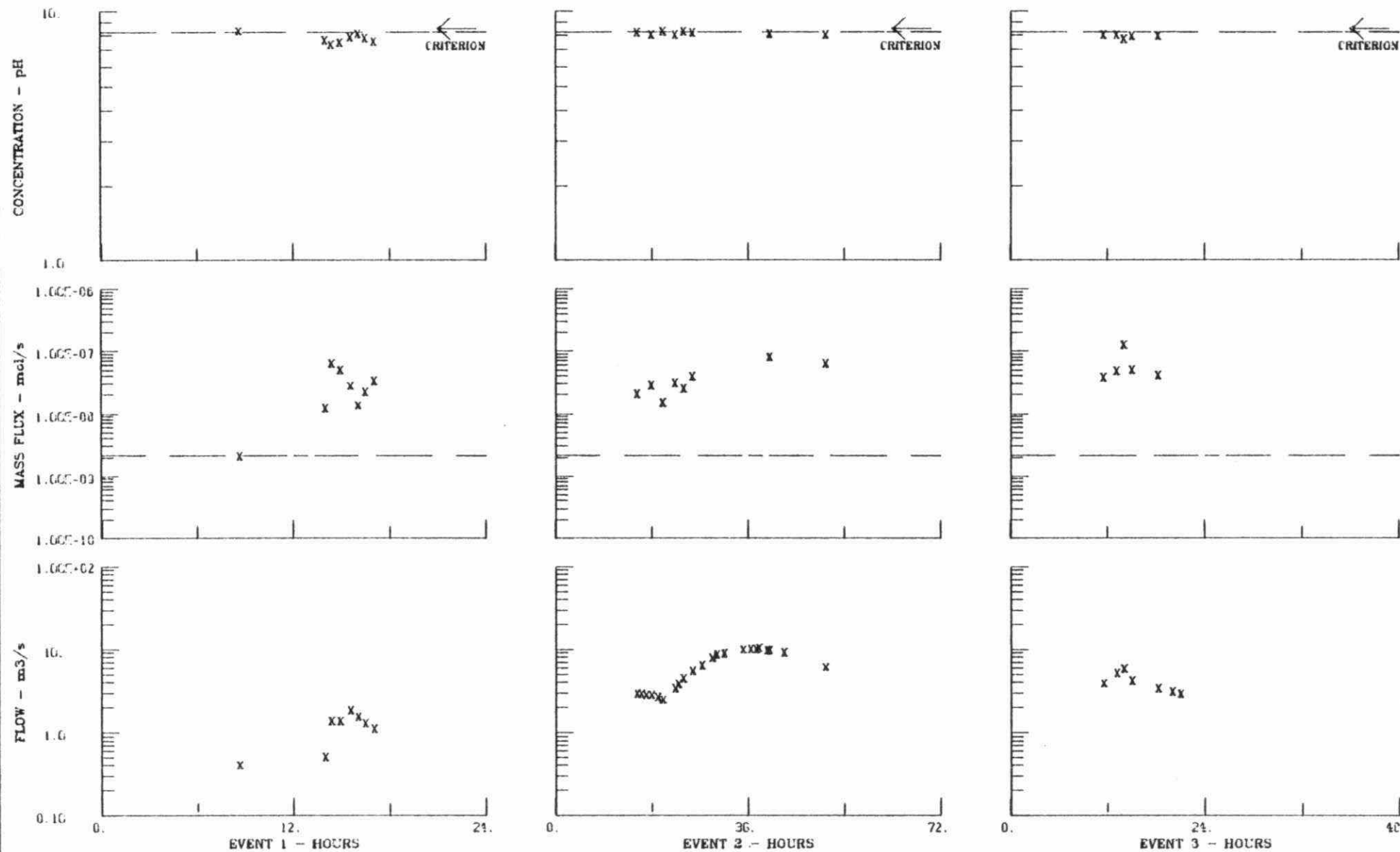
EVENT 2 - HOURS

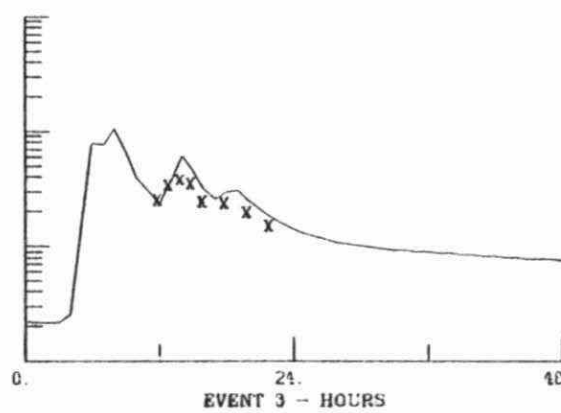
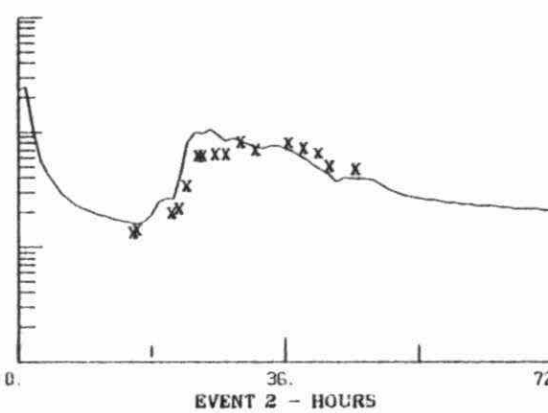
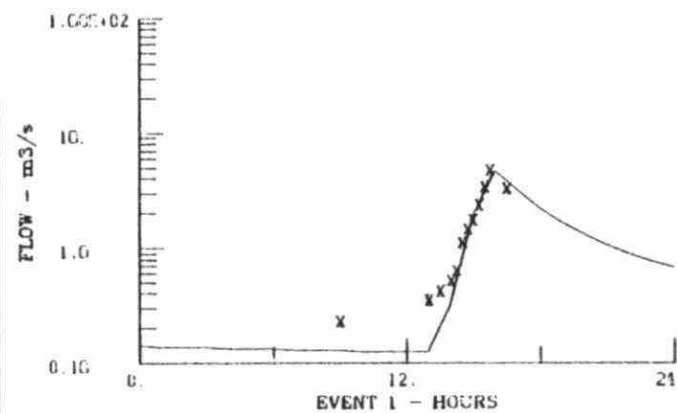
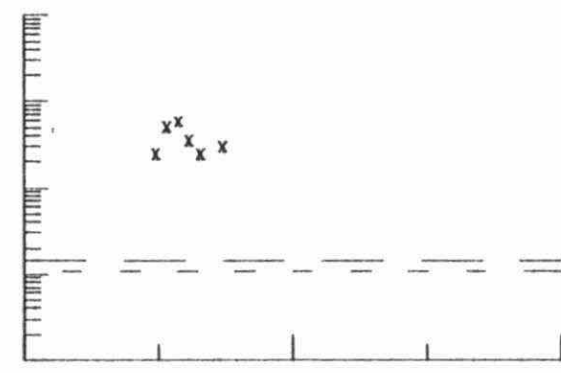
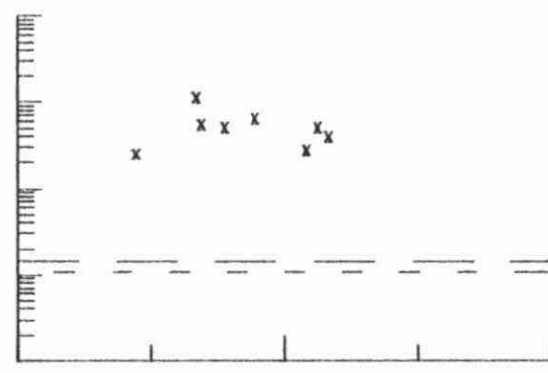
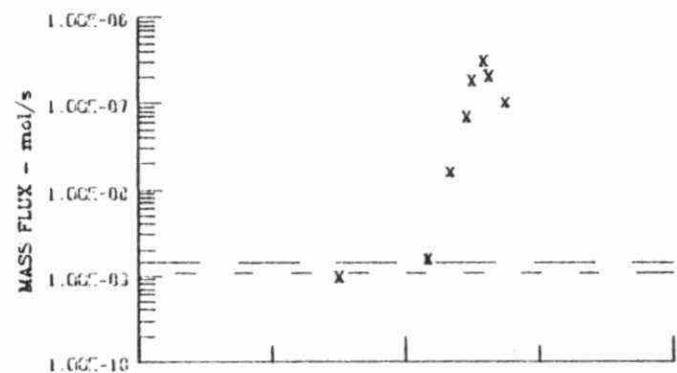
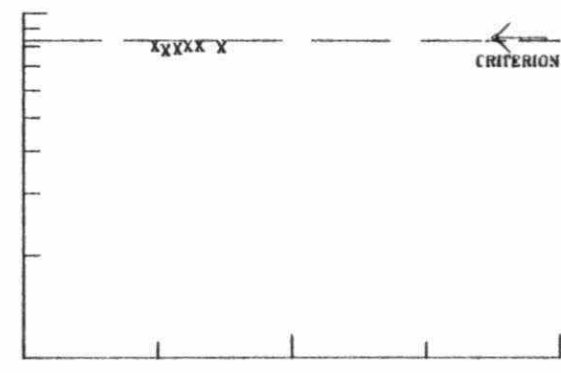
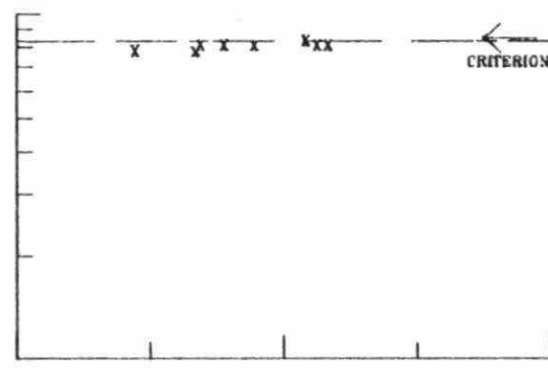
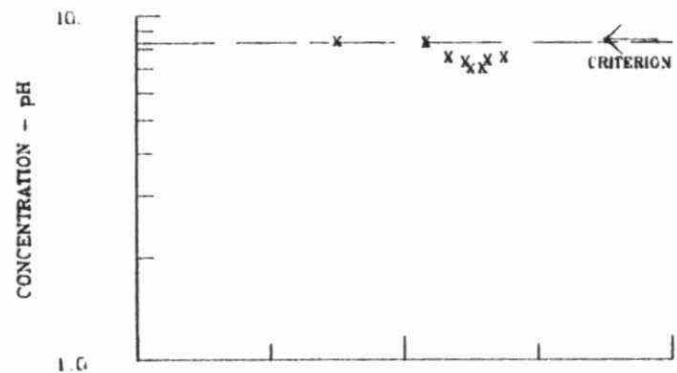
EVENT 3 - HOURS

ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - pH

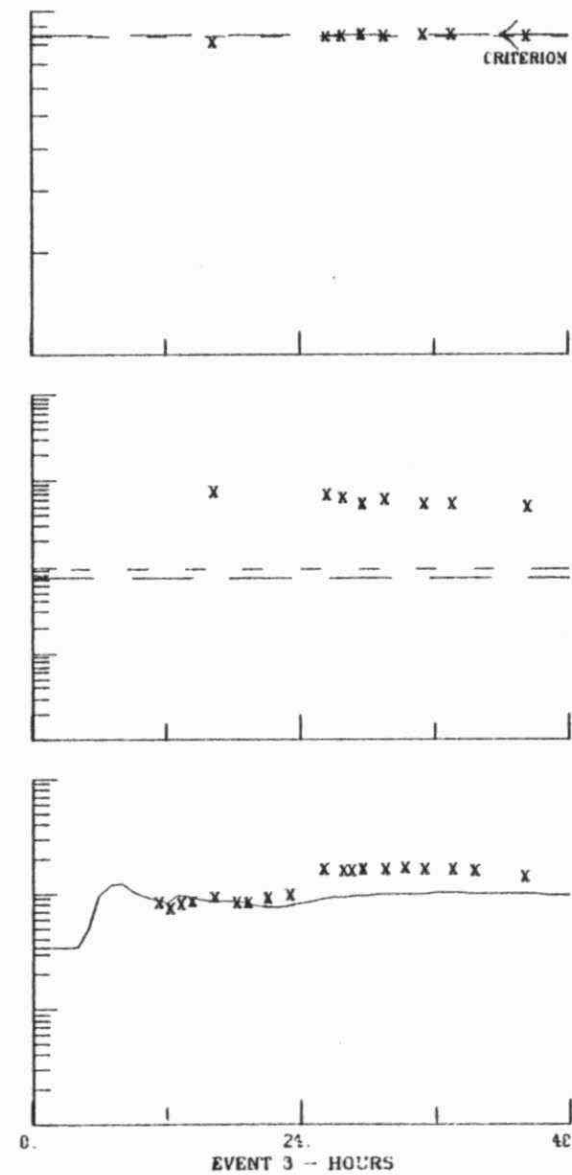
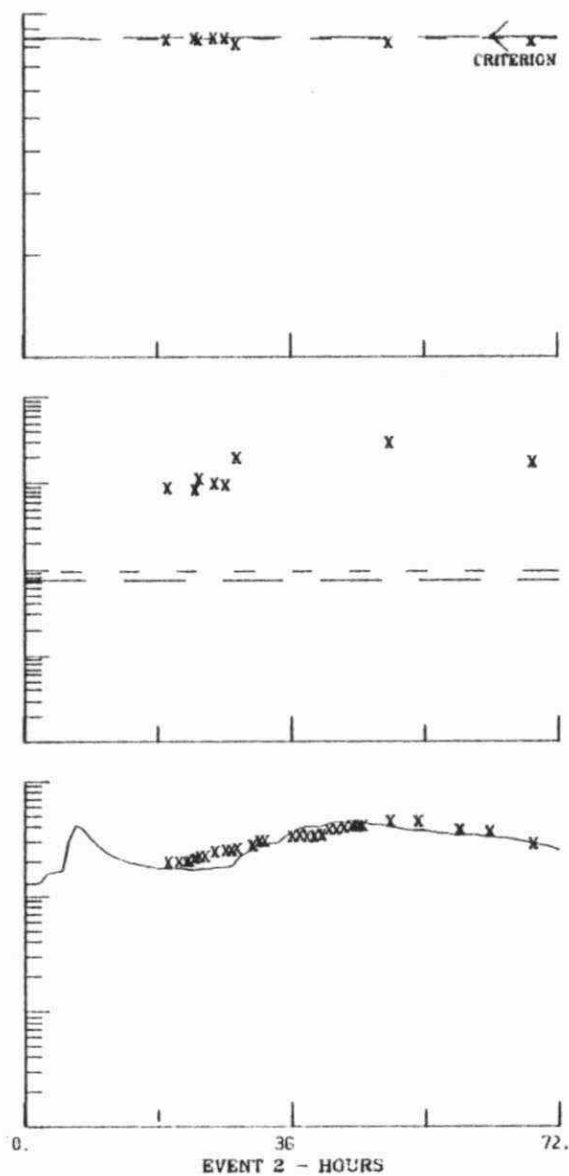
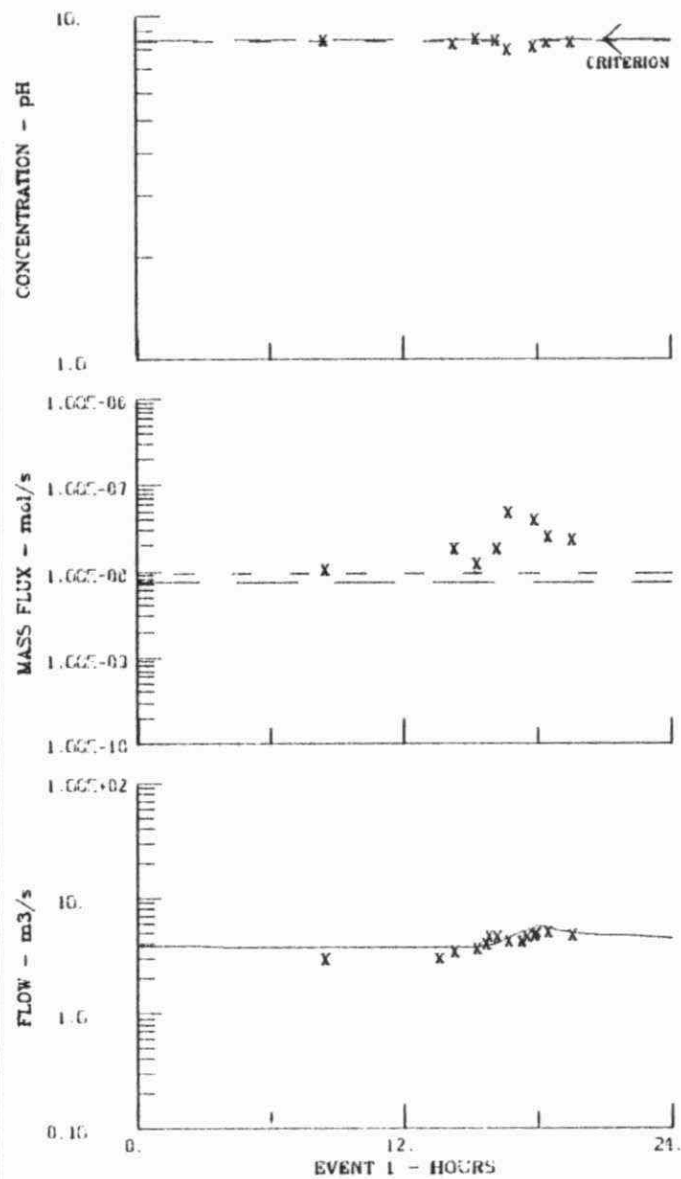


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - pH

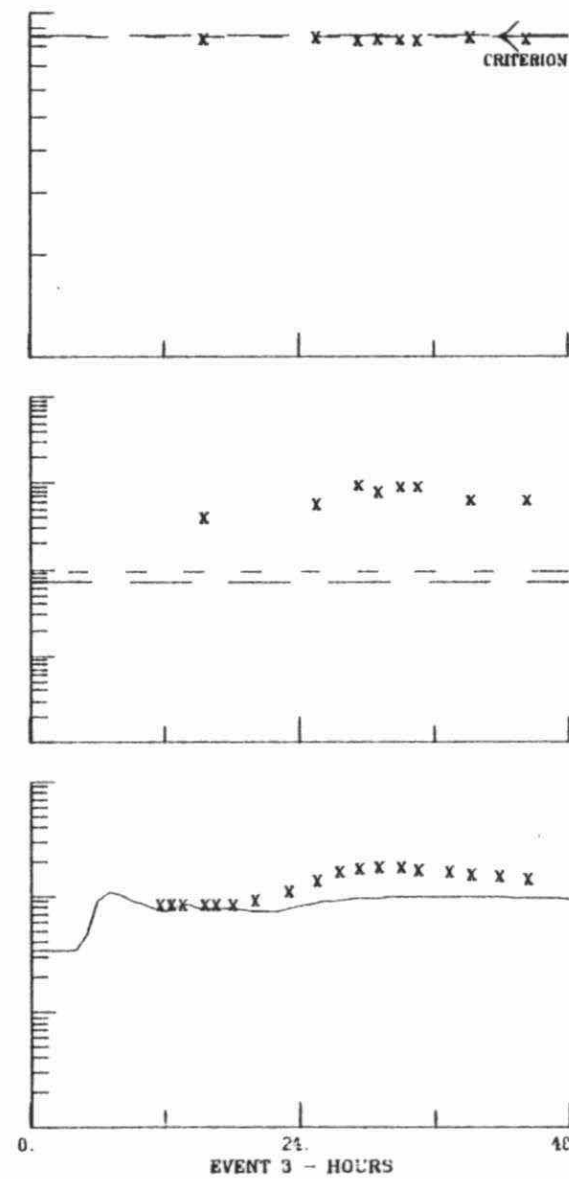
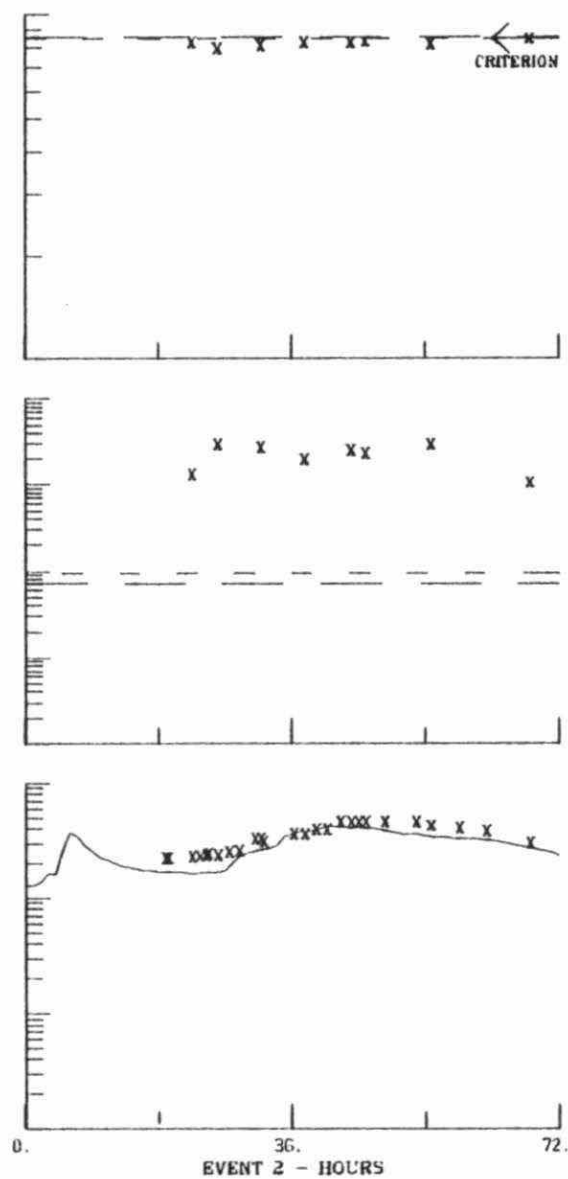
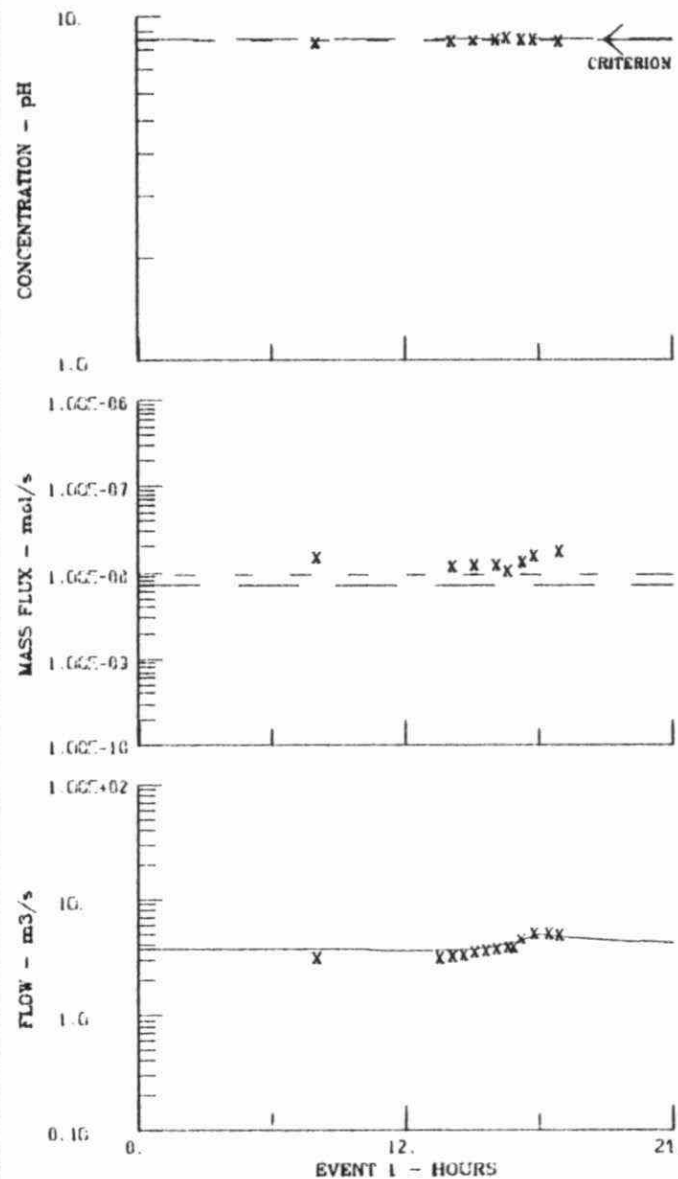




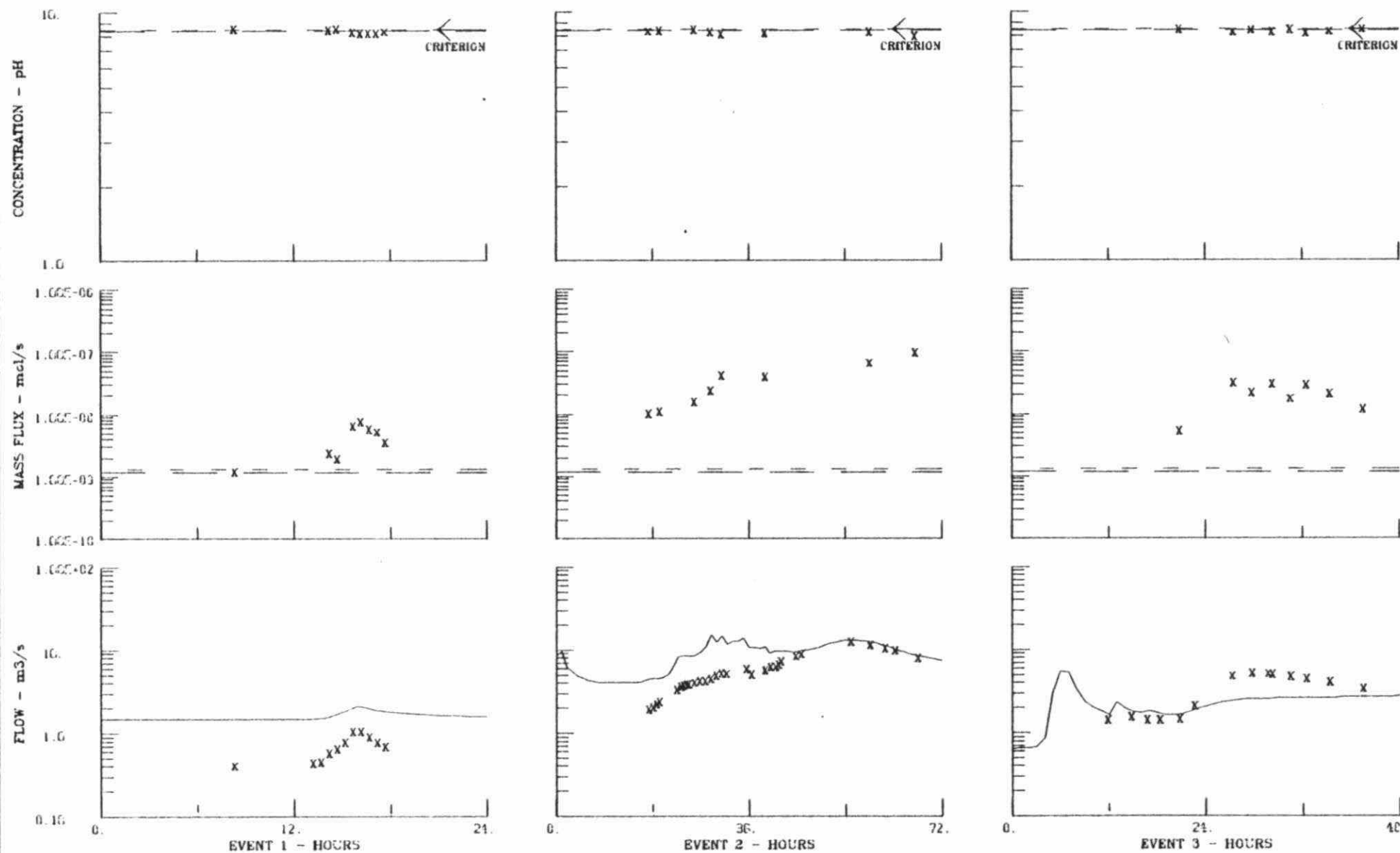
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - pH

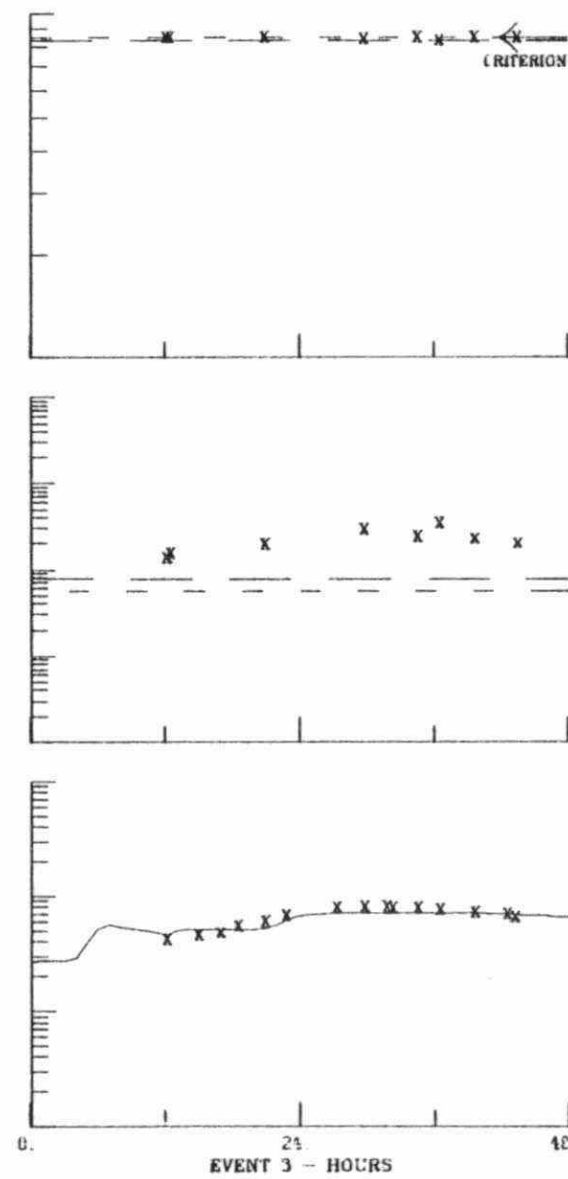
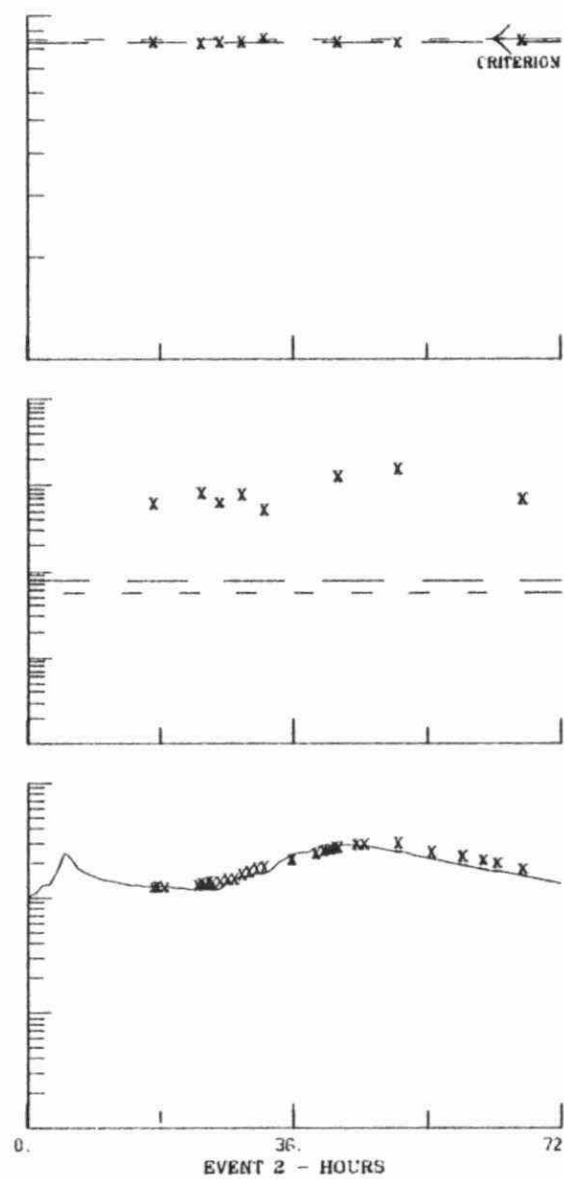
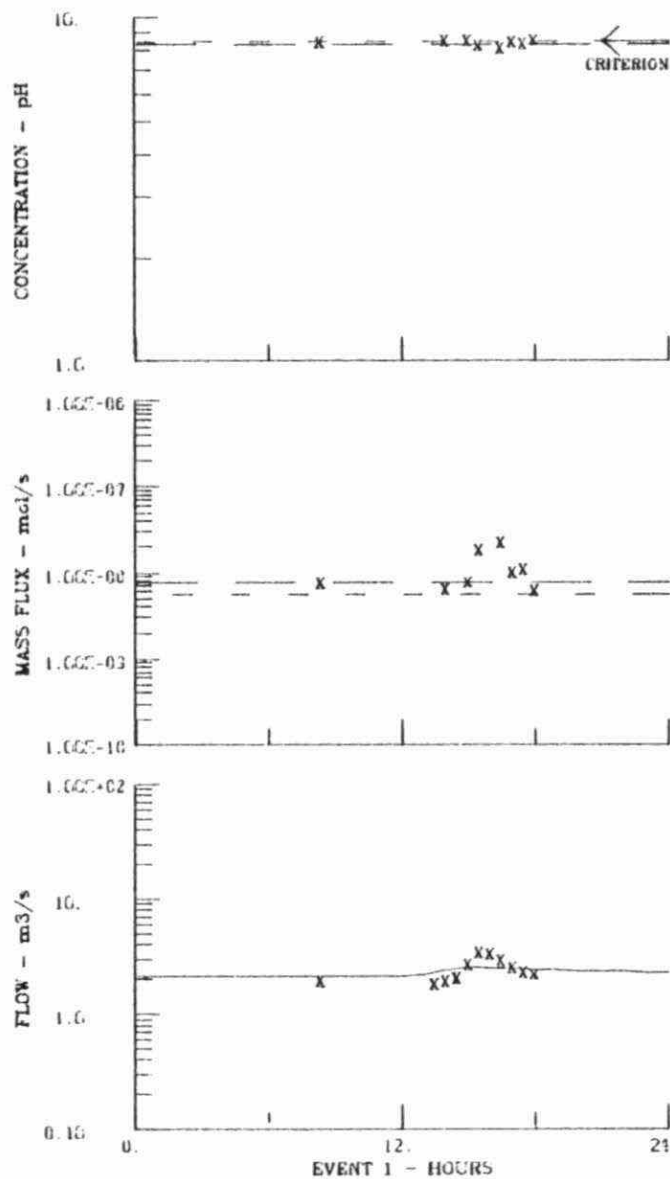


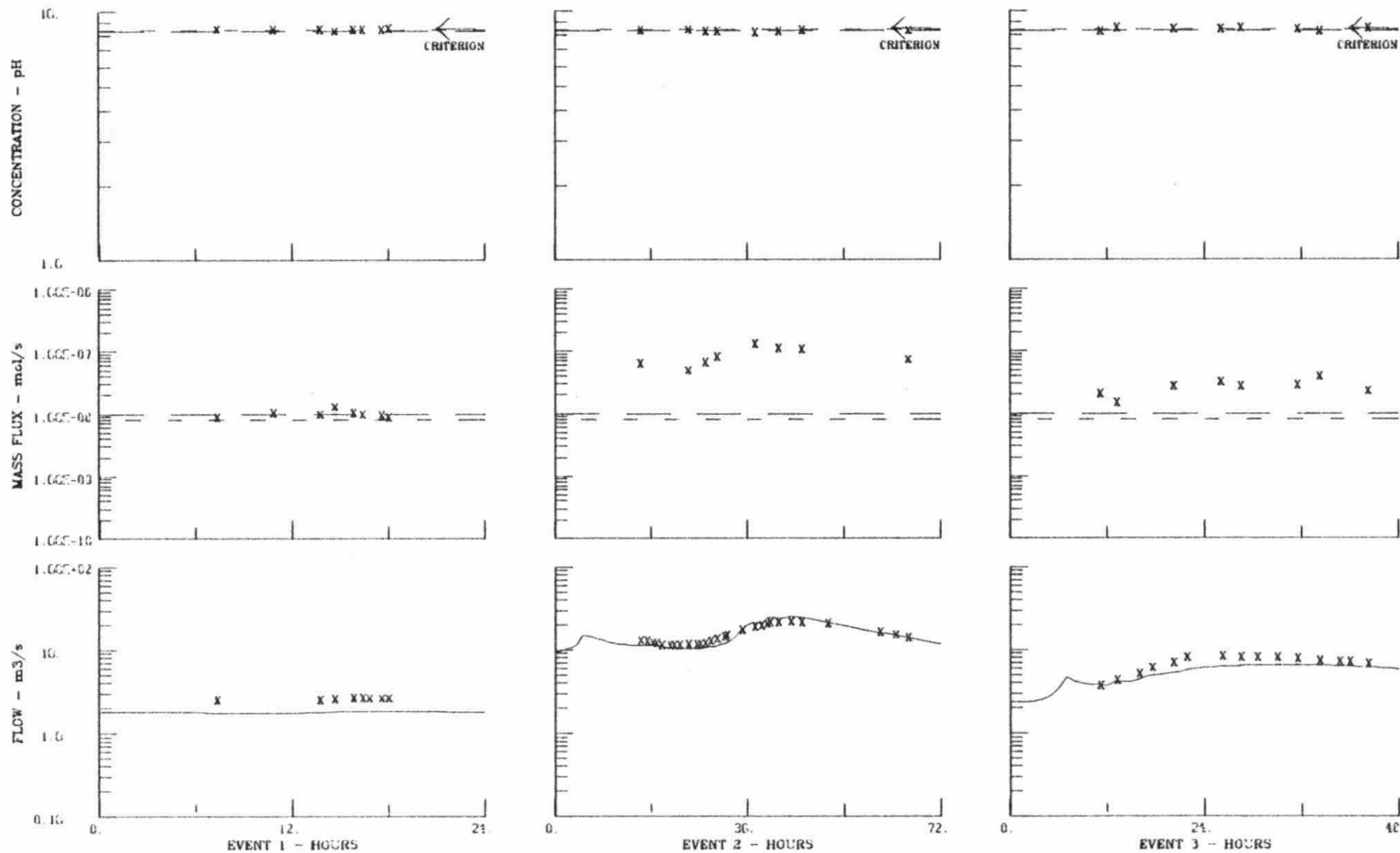
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - pH



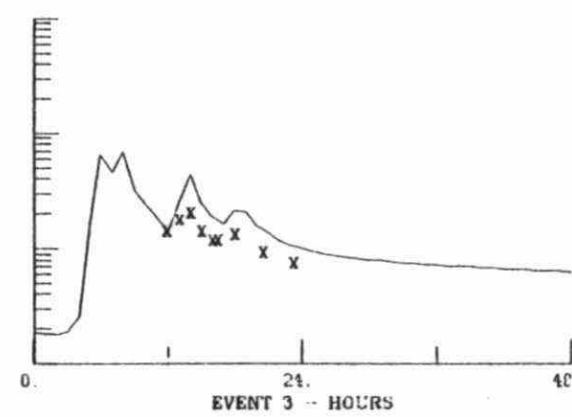
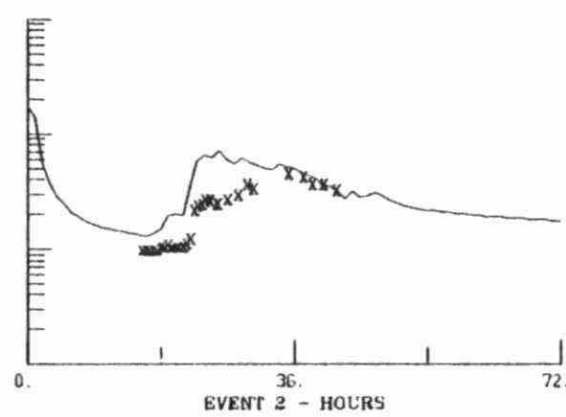
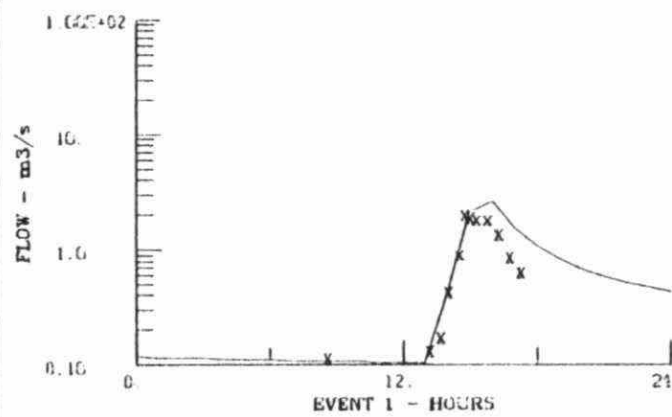
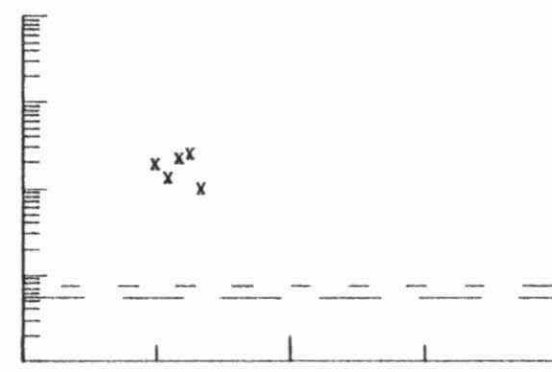
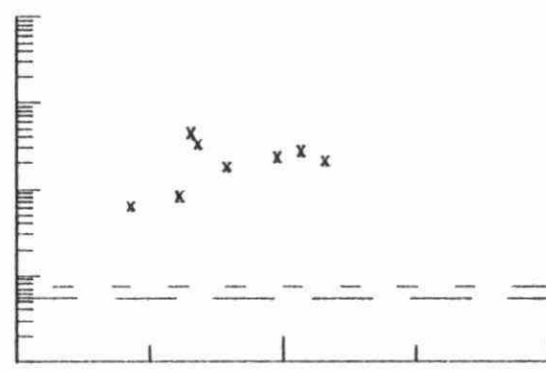
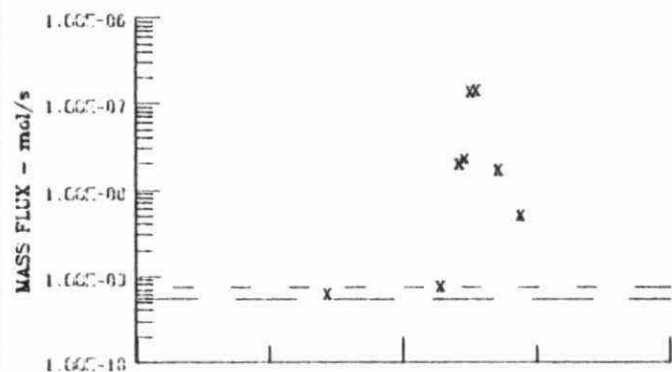
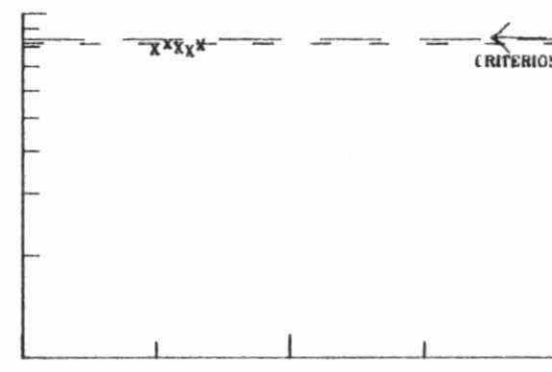
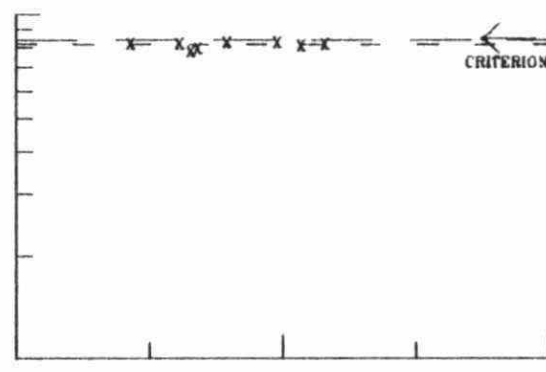
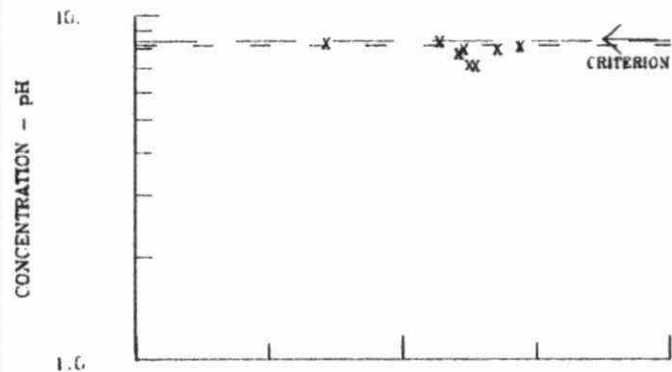
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - pH





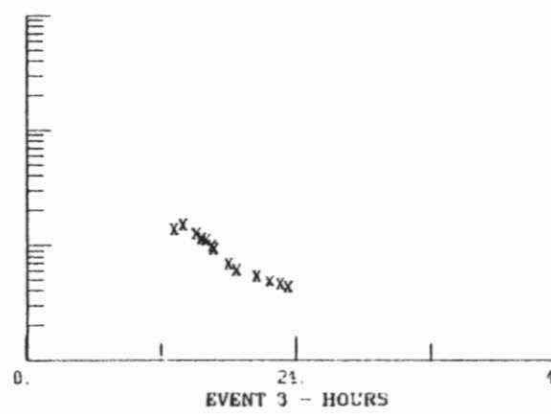
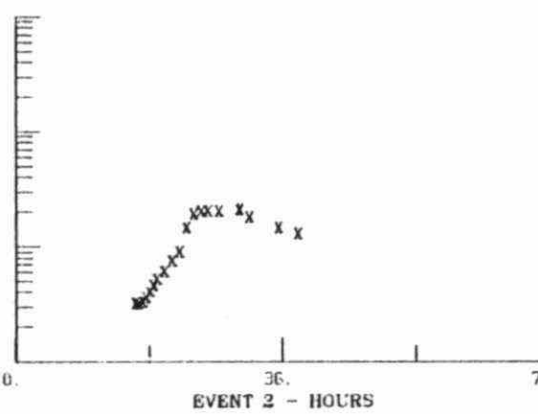
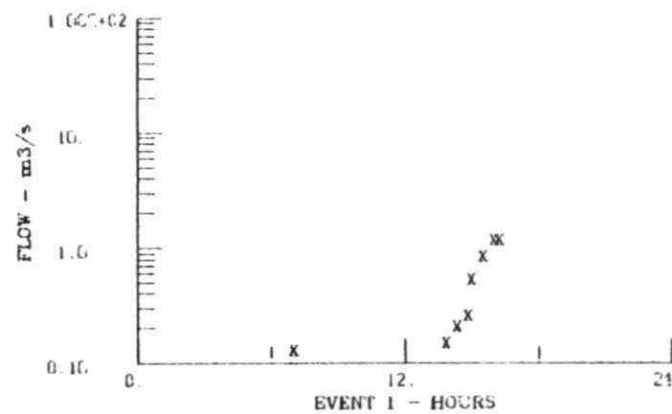
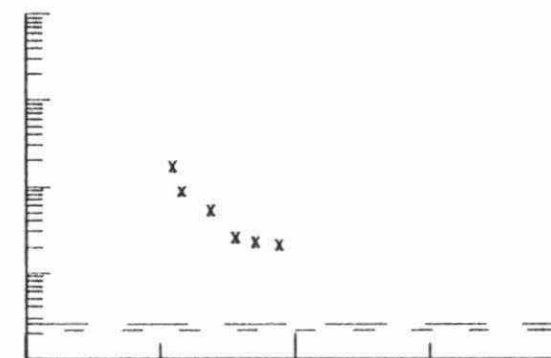
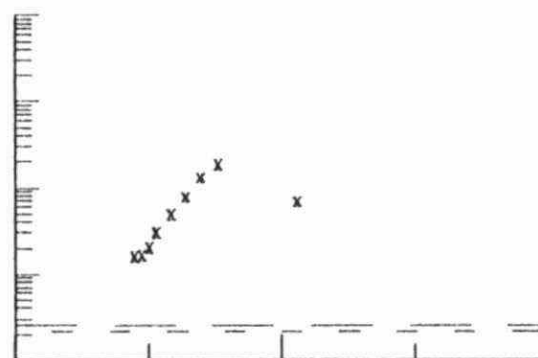
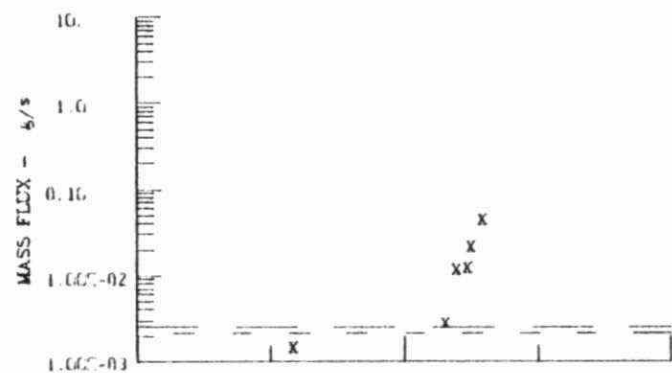
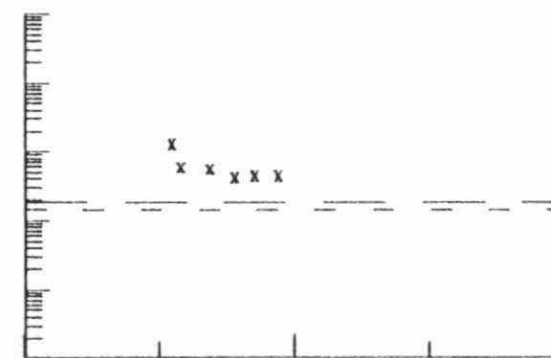
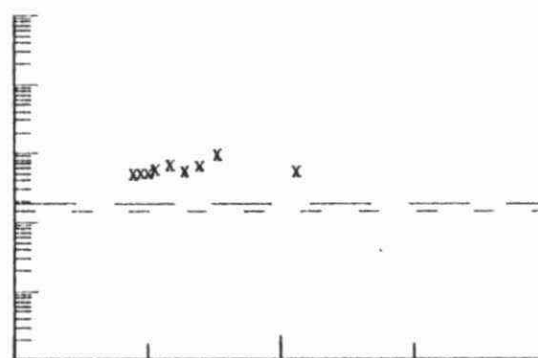
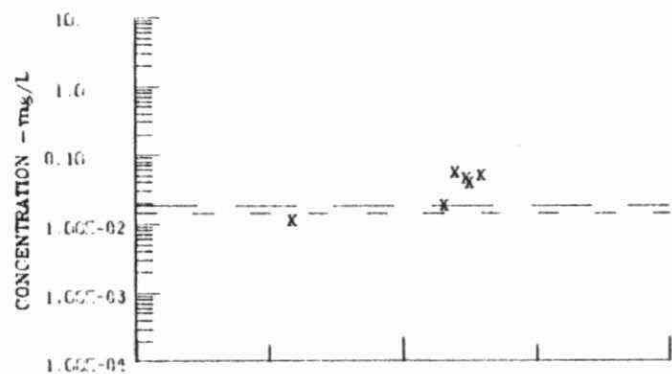


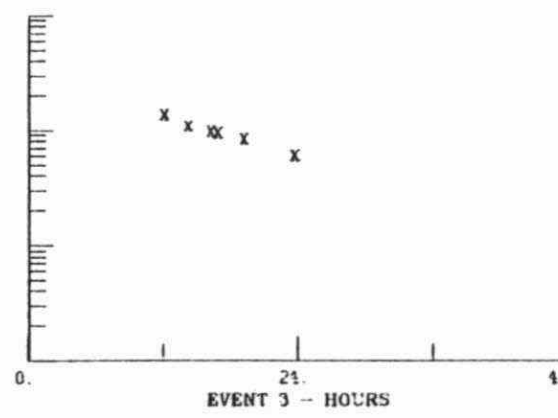
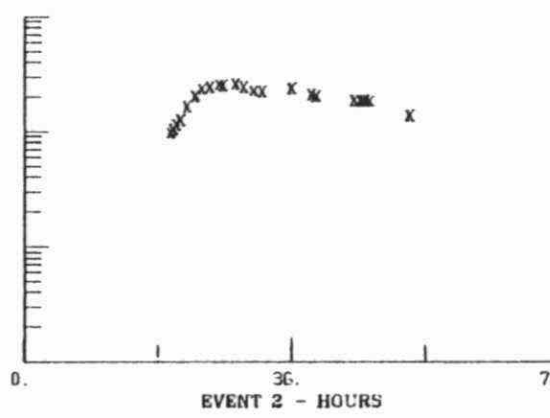
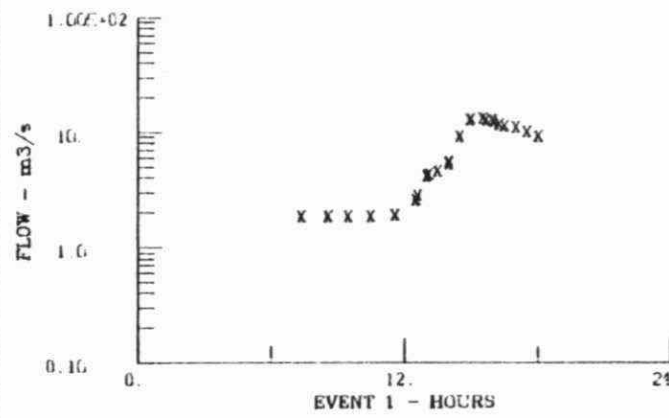
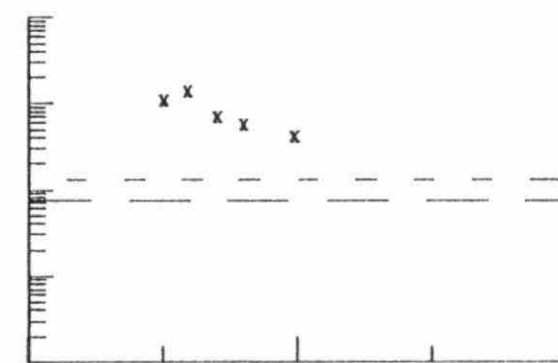
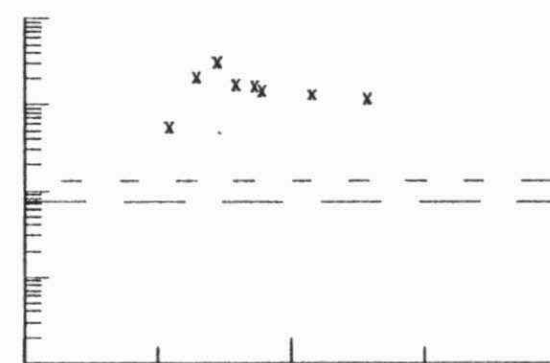
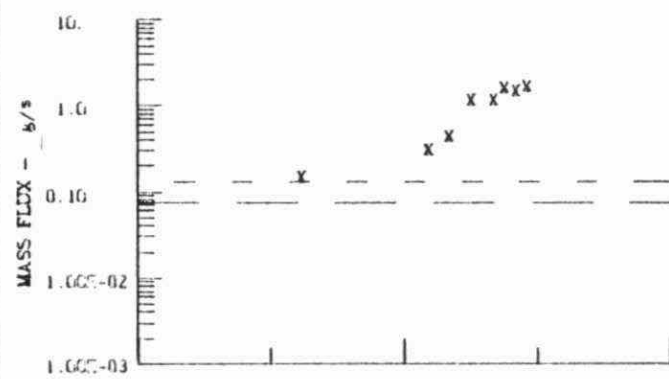
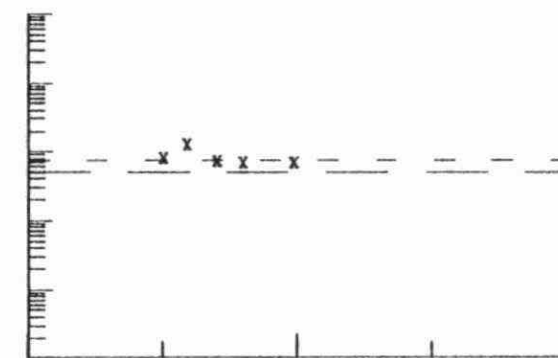
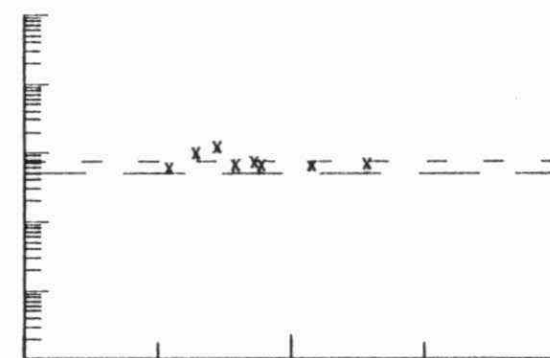
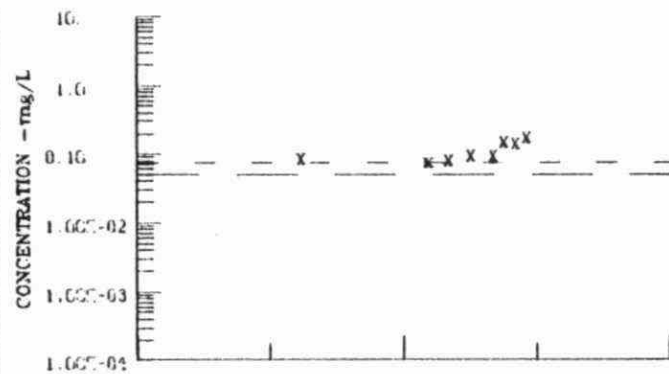
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - pH

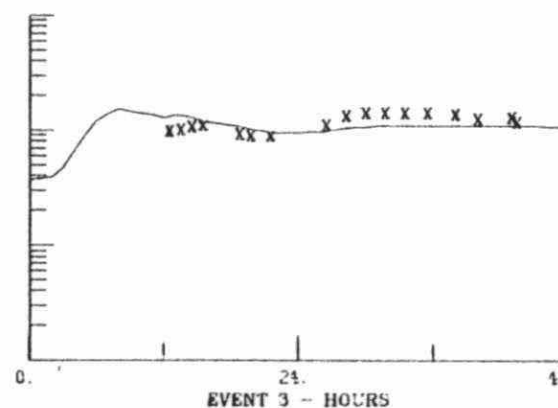
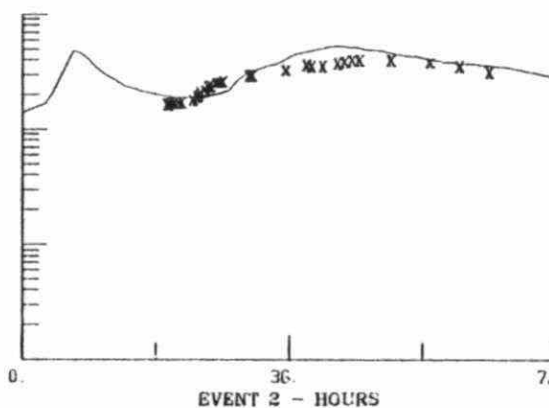
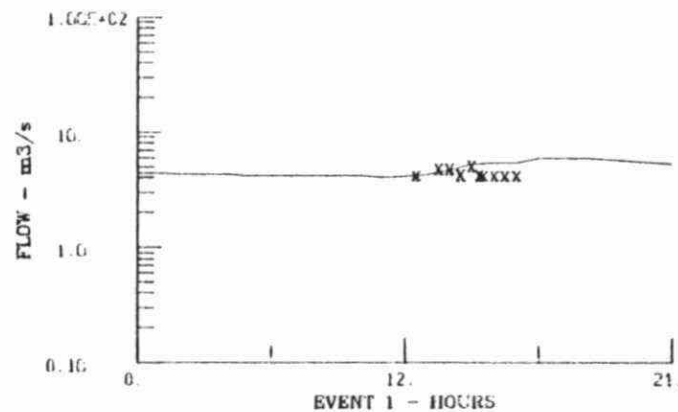
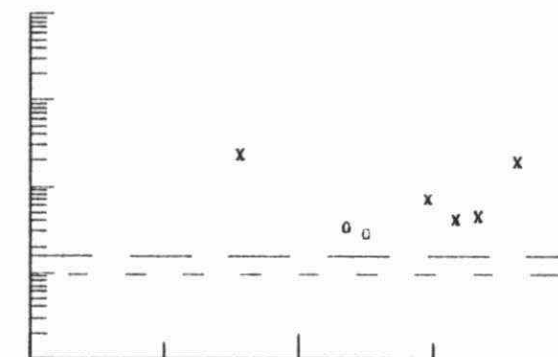
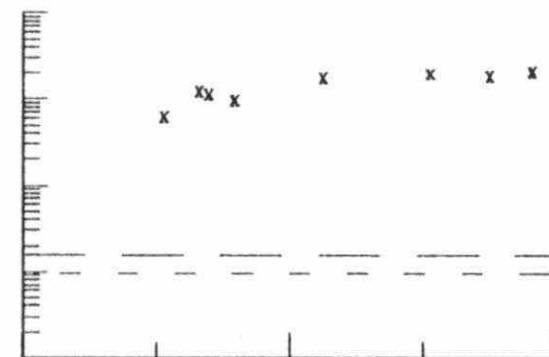
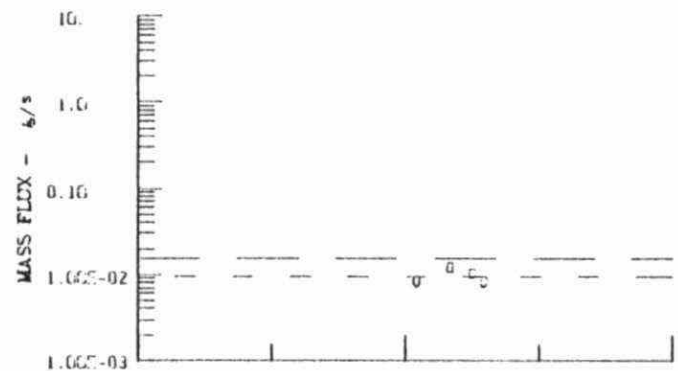
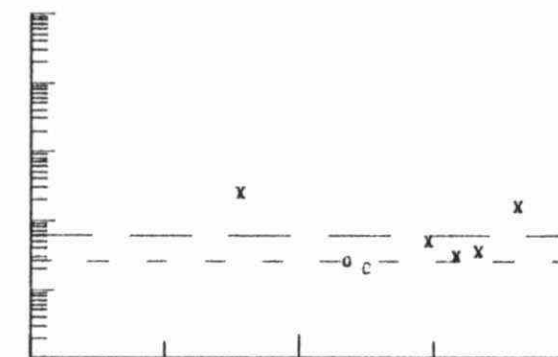
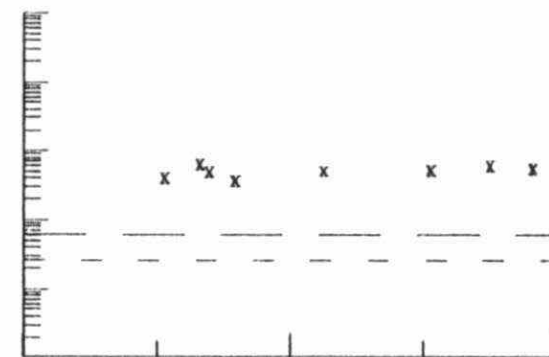
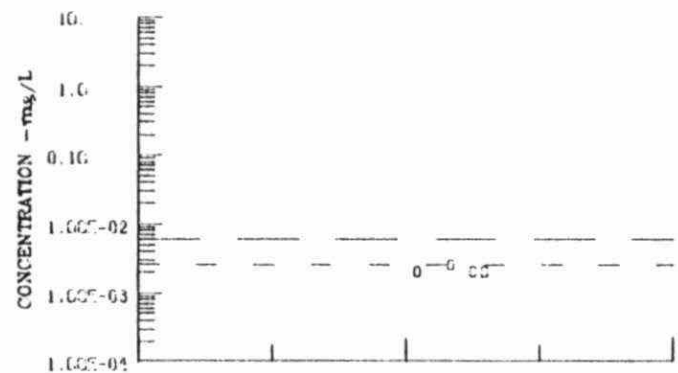


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - pH

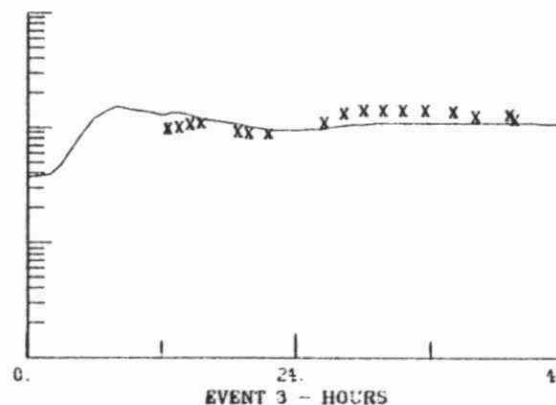
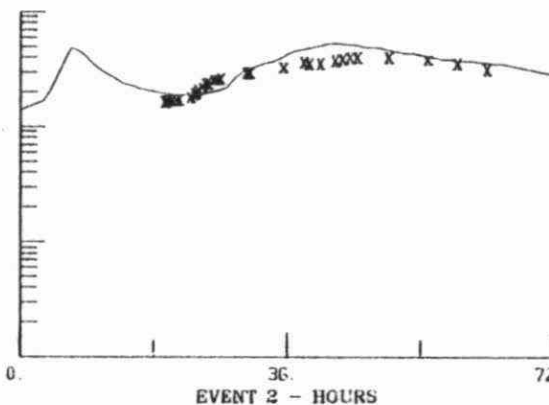
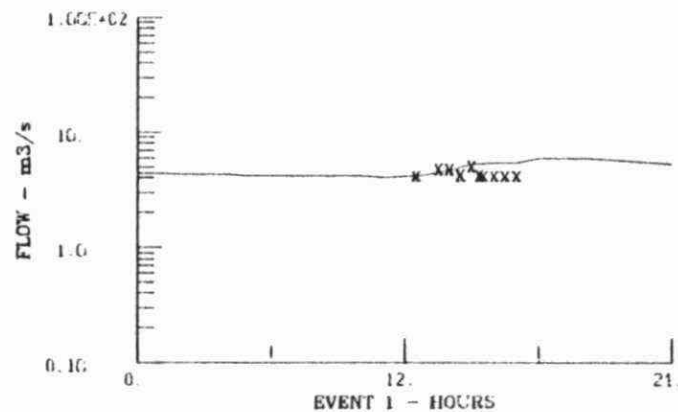
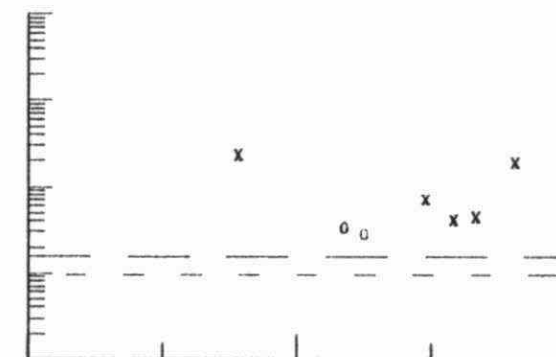
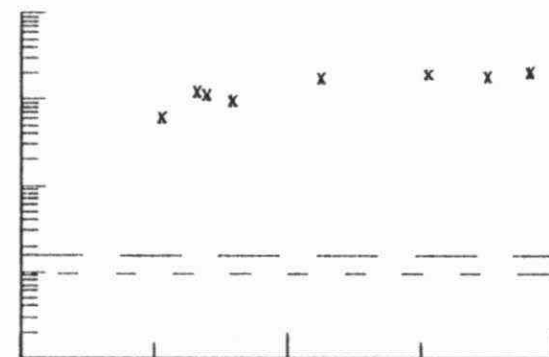
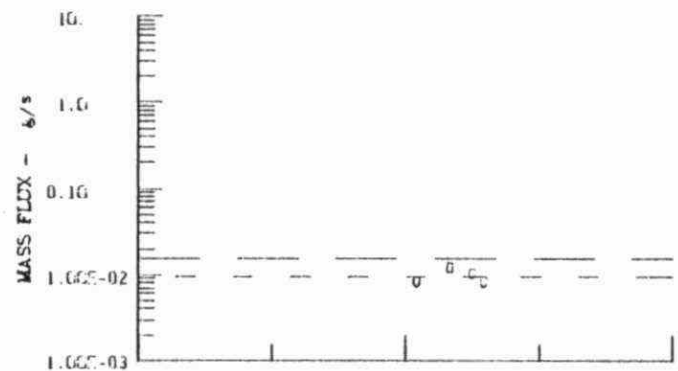
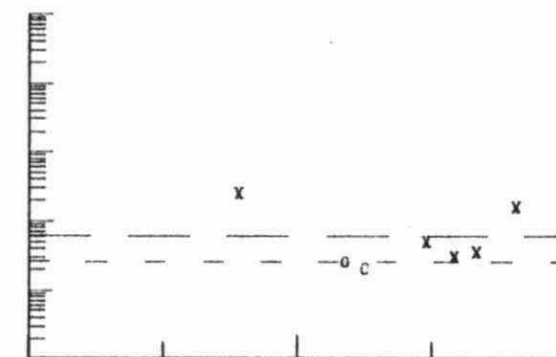
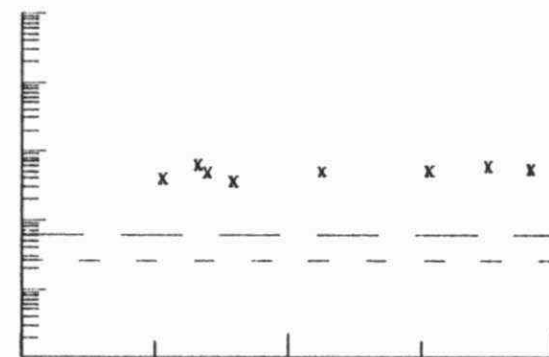
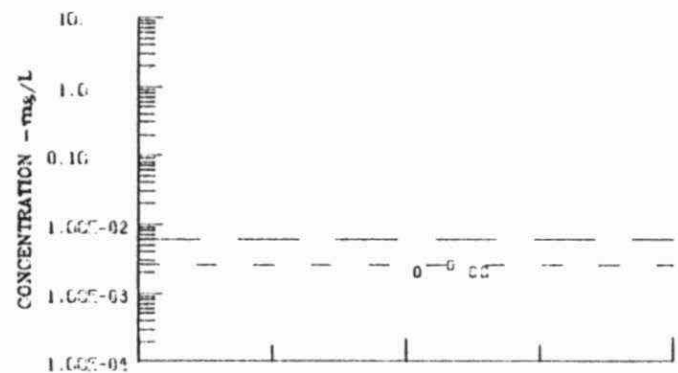
PHOSPHATES, FILTERED REACTIVE



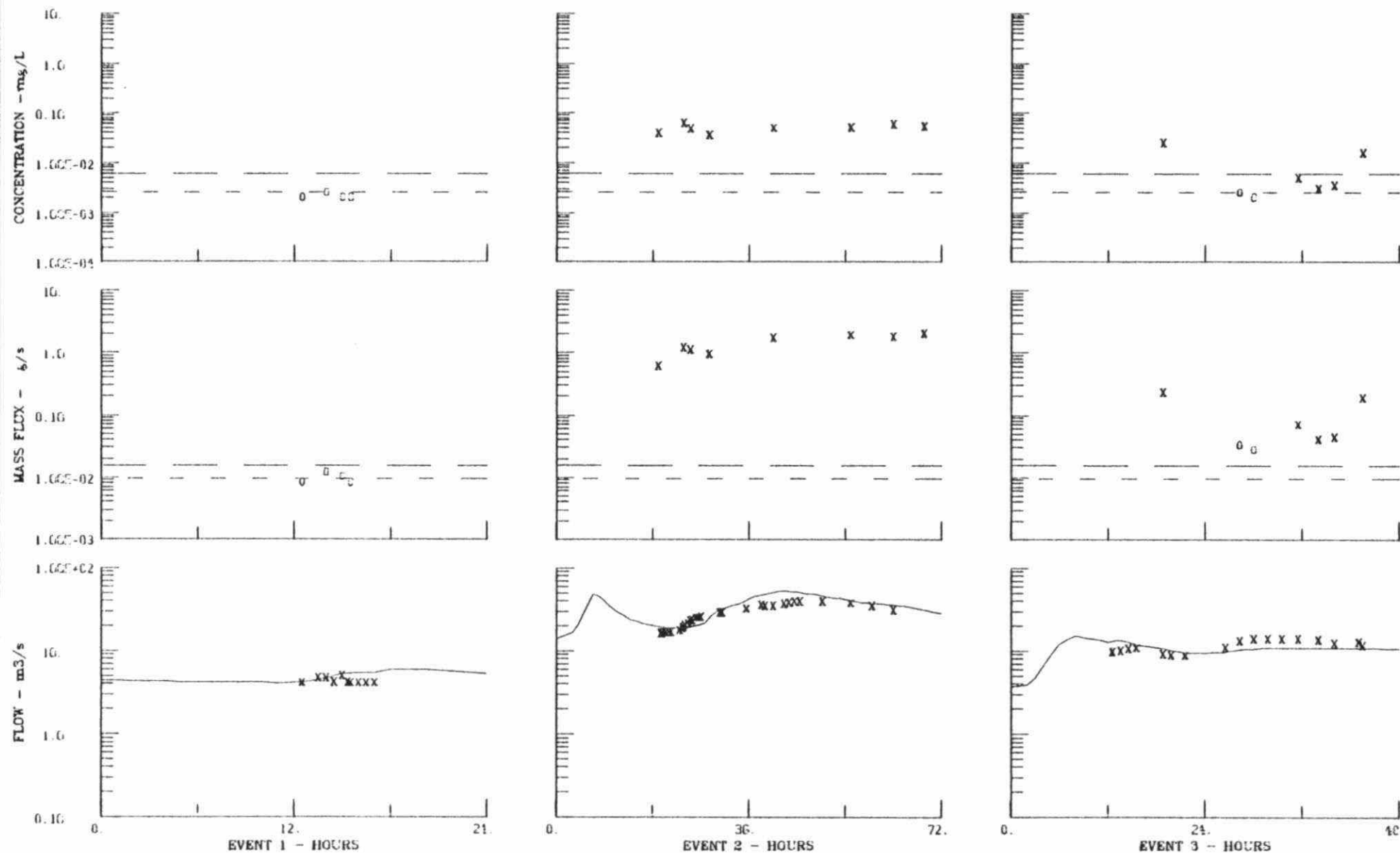




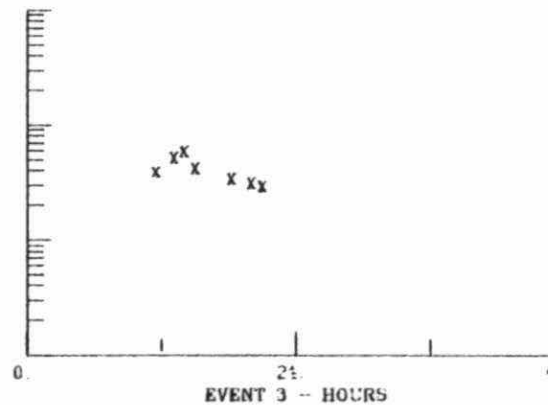
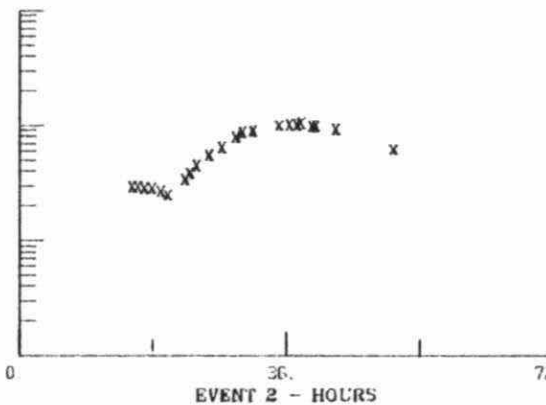
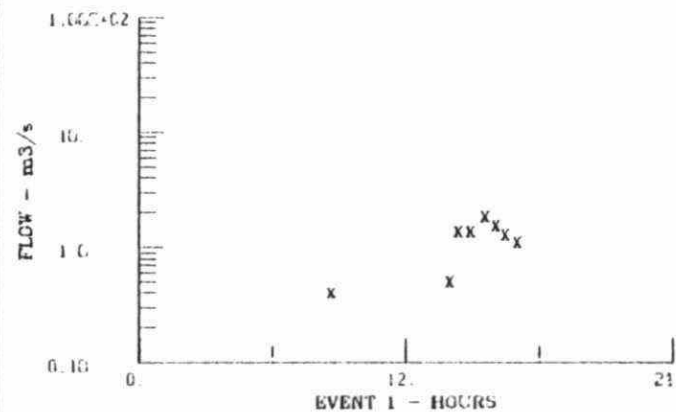
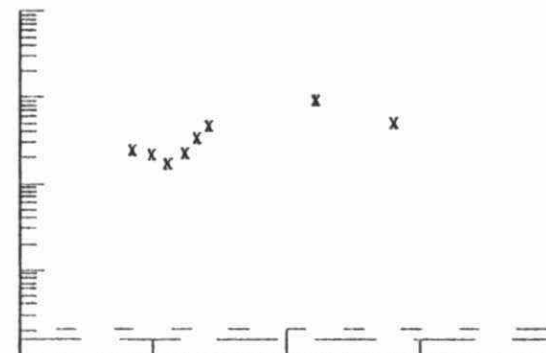
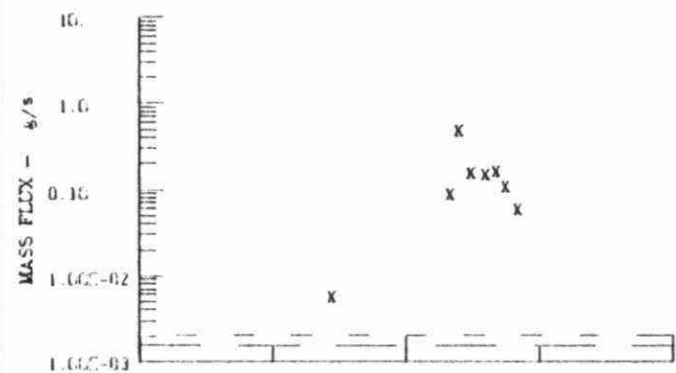
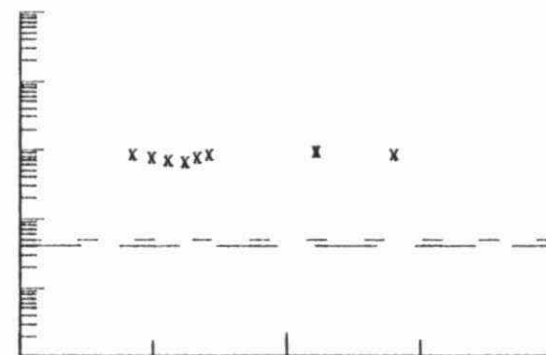
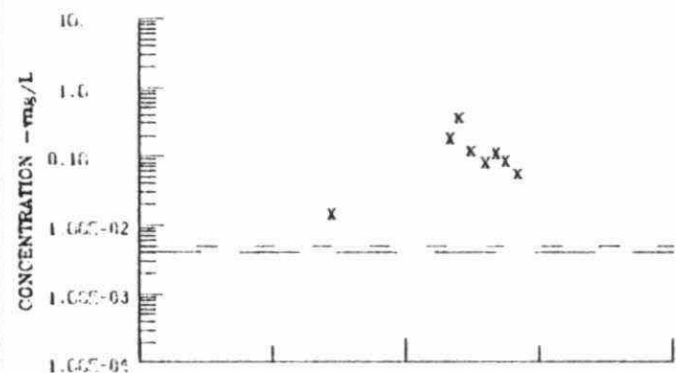
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - PHOSPHATES - FILT, REACT

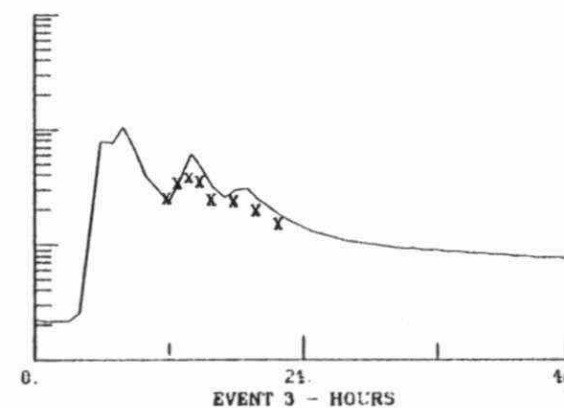
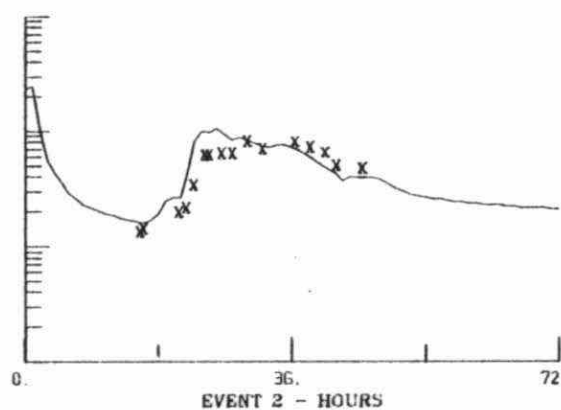
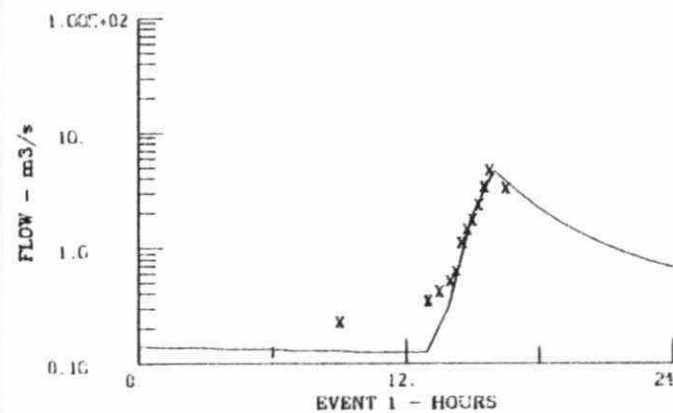
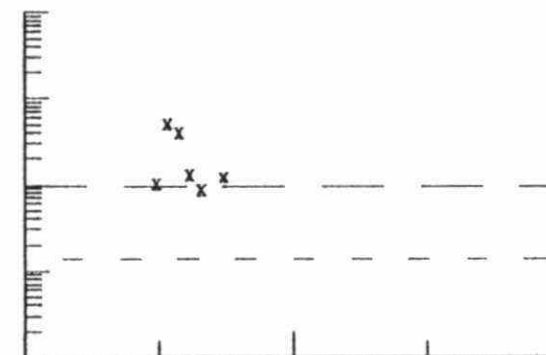
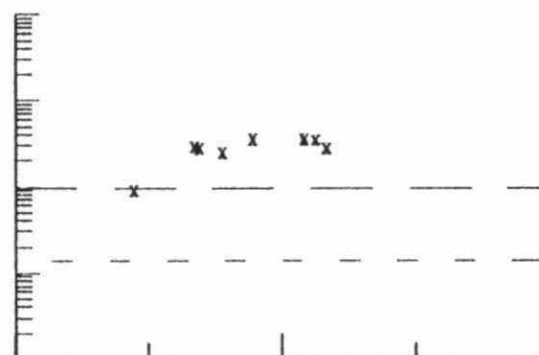
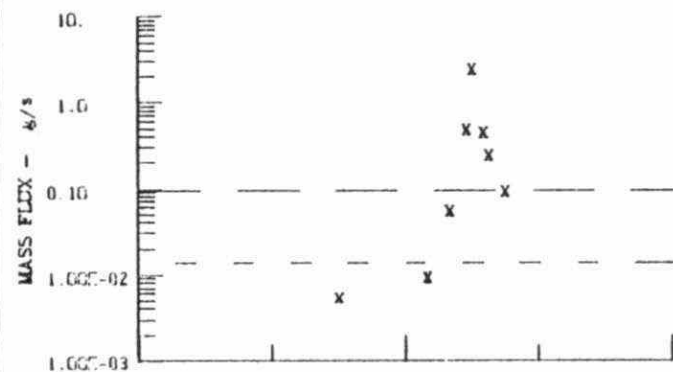
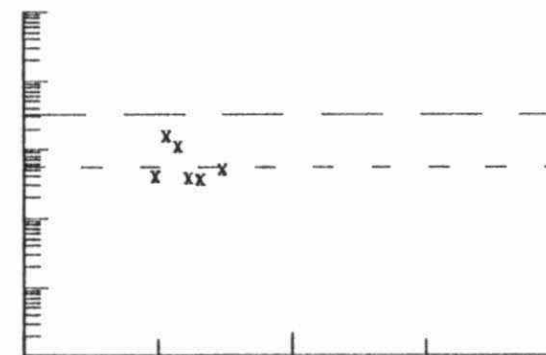
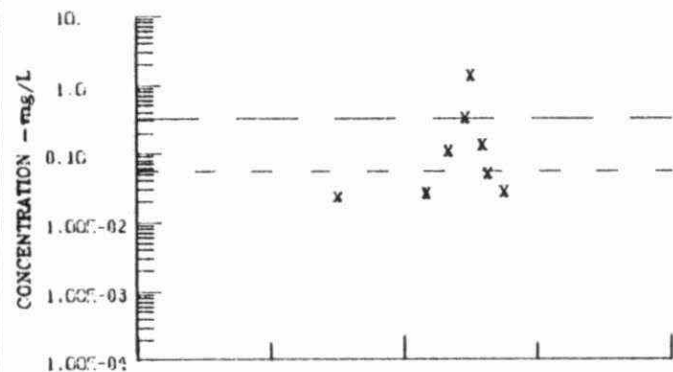


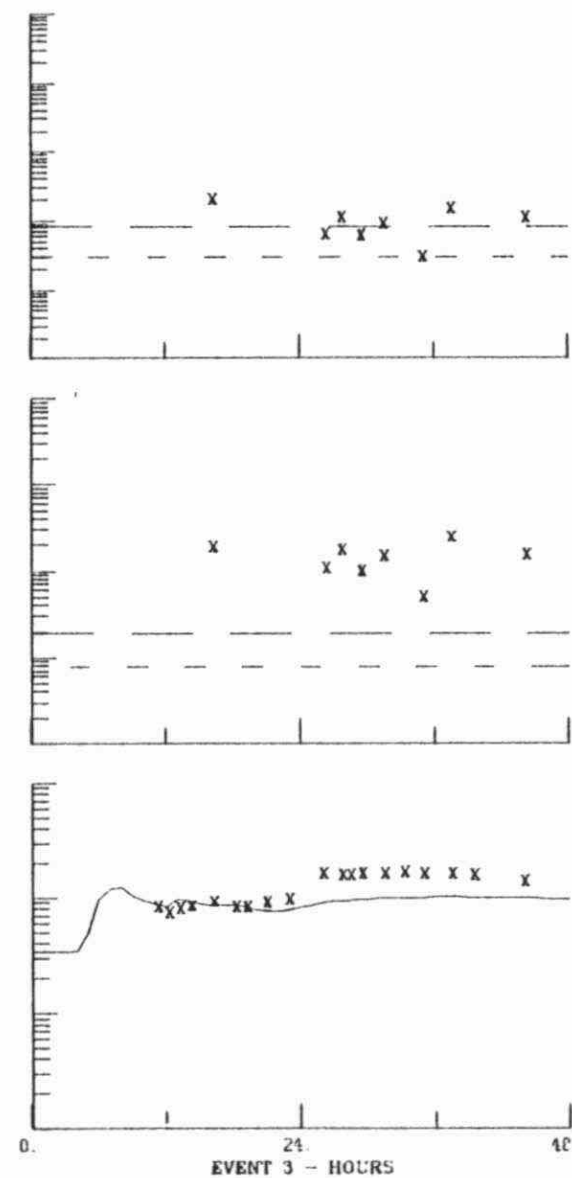
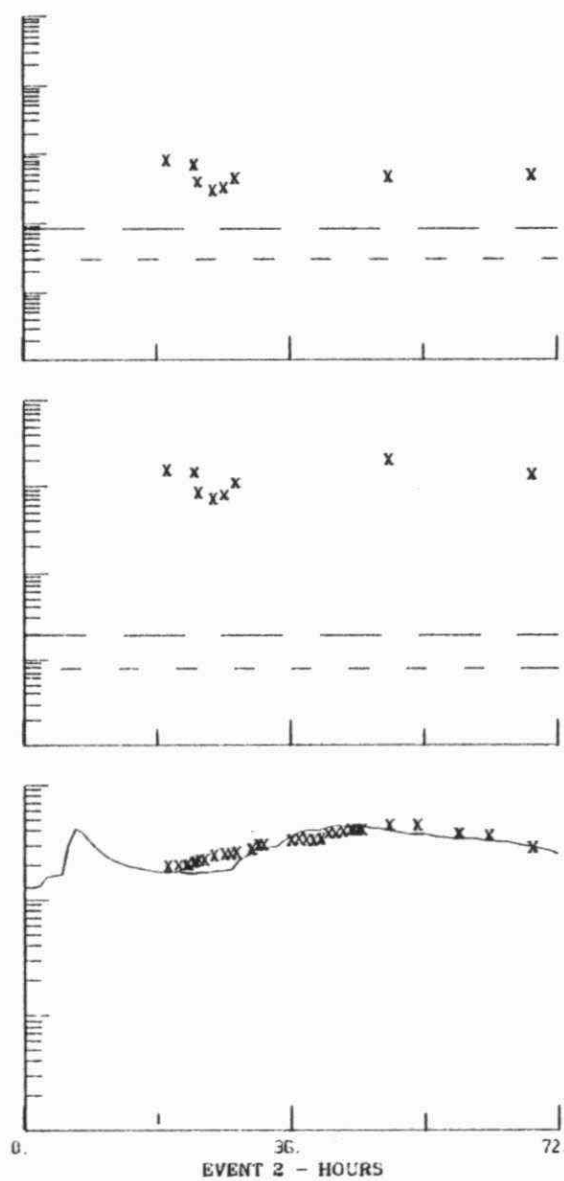
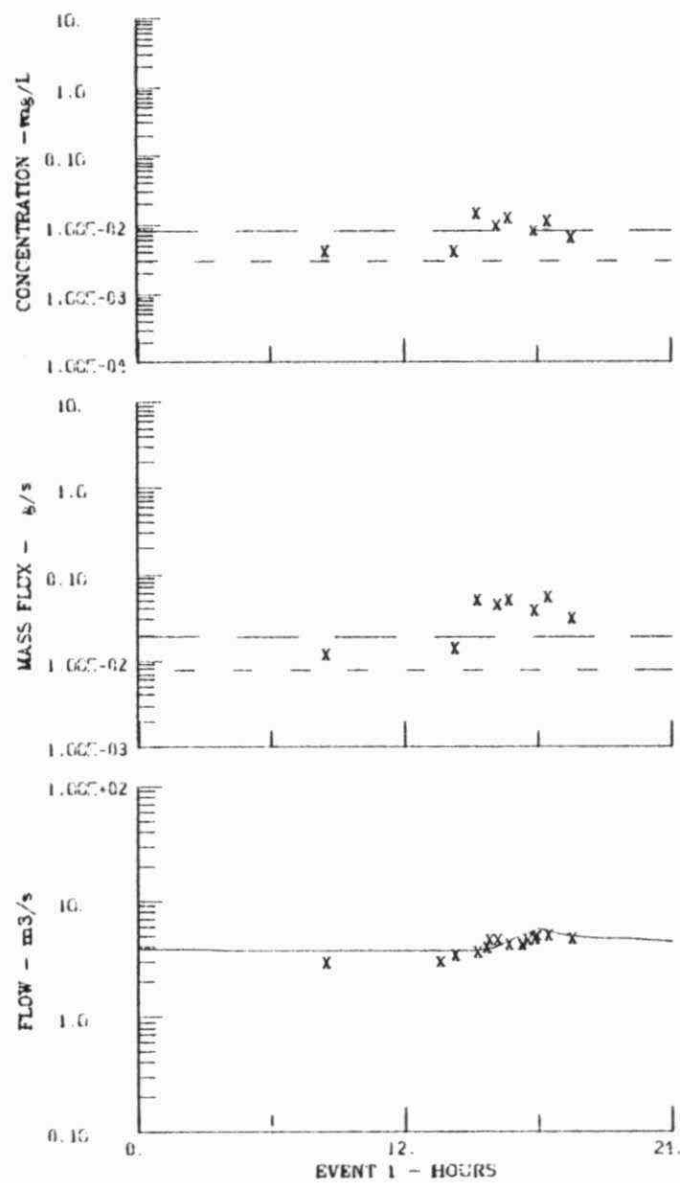
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - PHOSPHATES - FILT, REACT



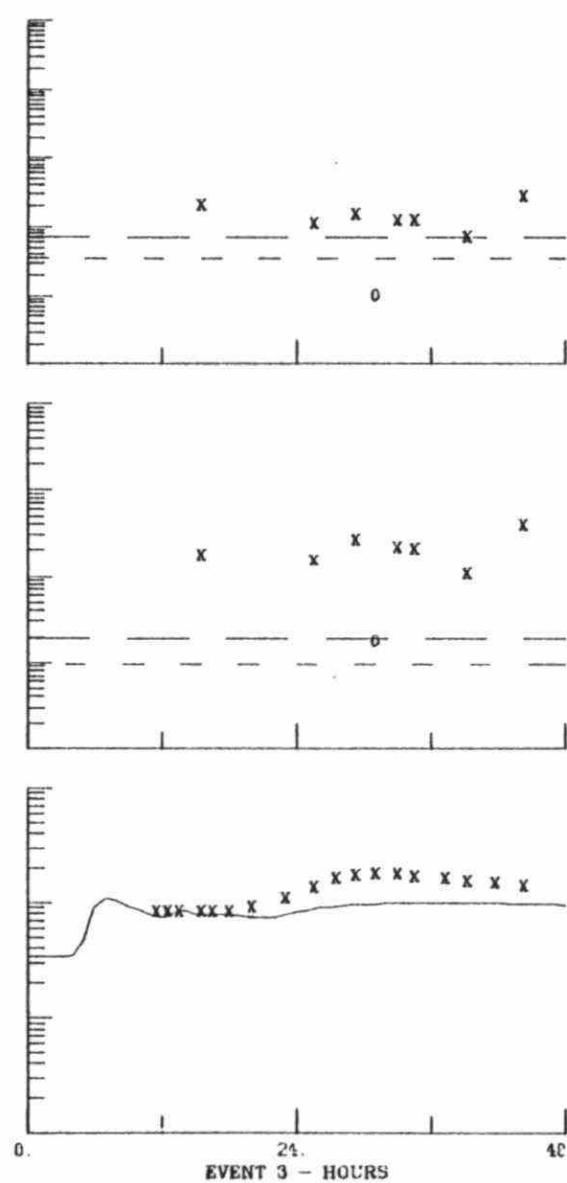
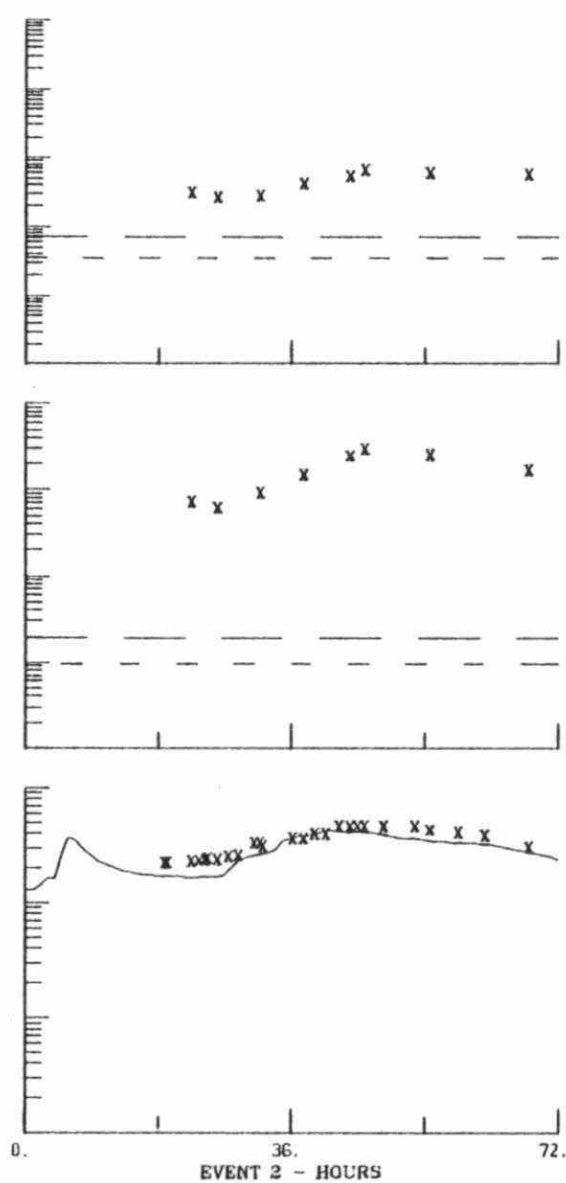
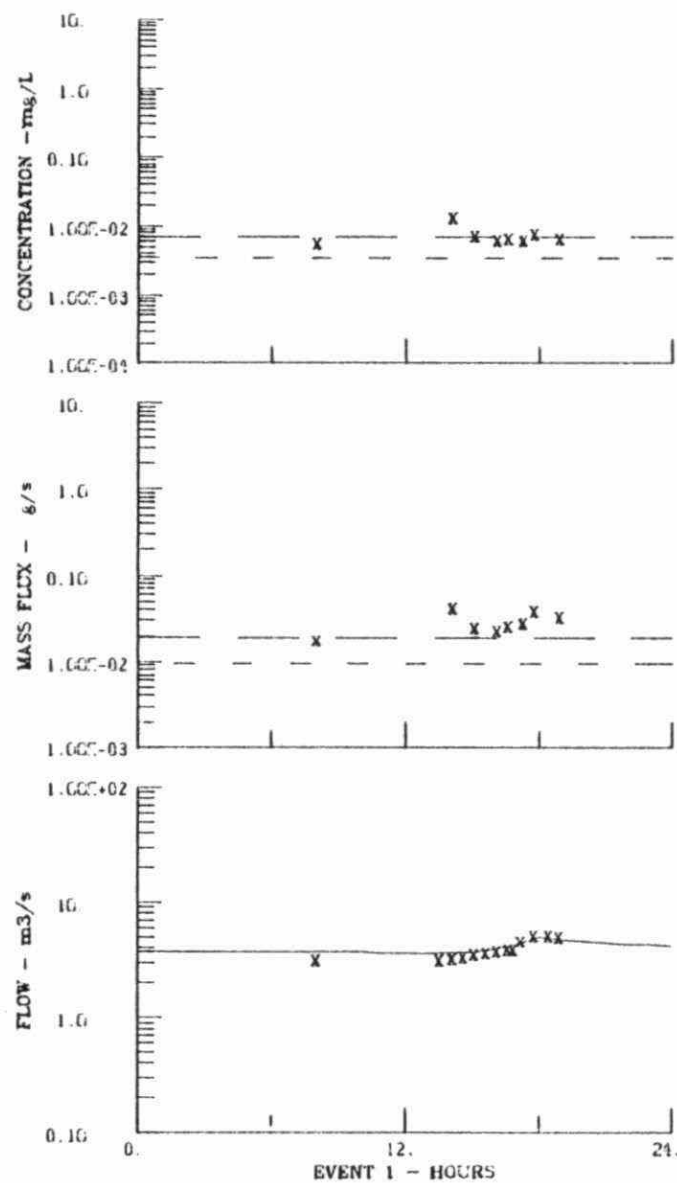
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - PHOSPHATES - FILT, REACT

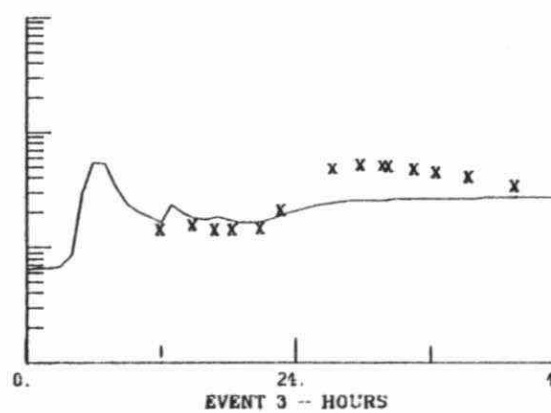
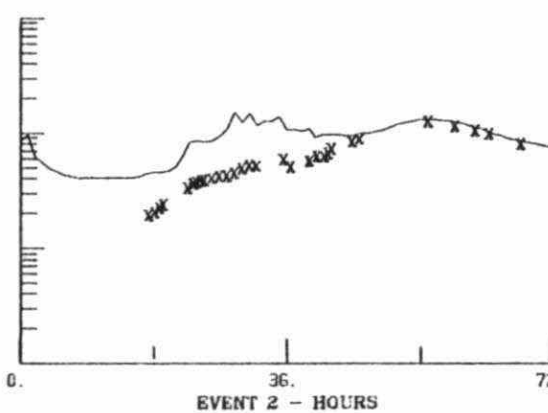
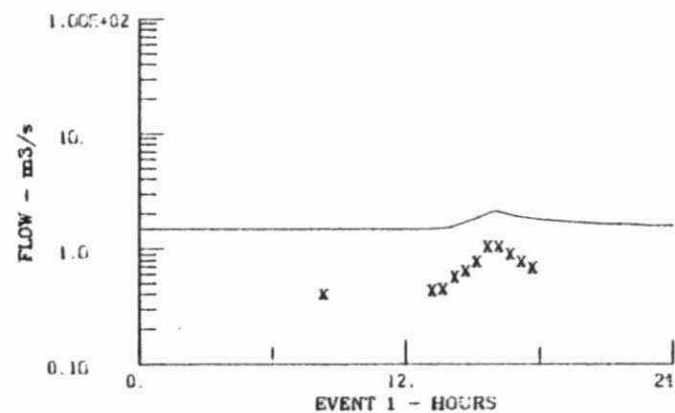
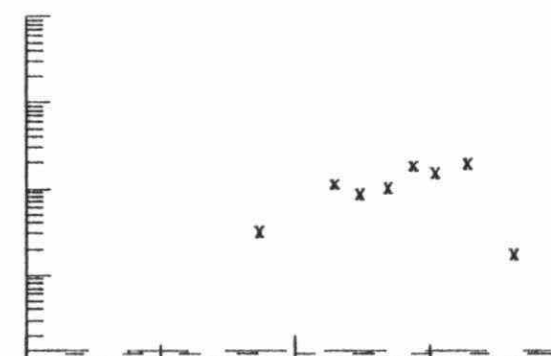
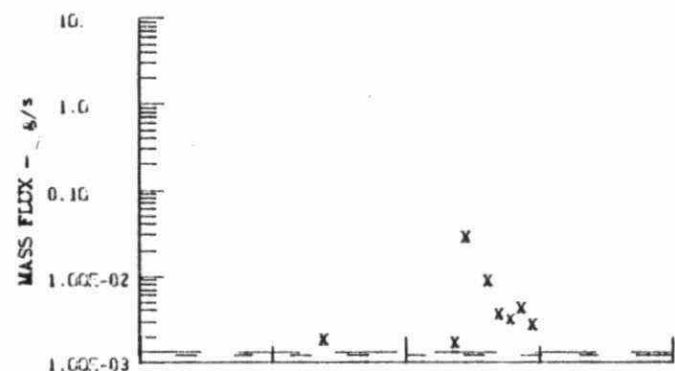
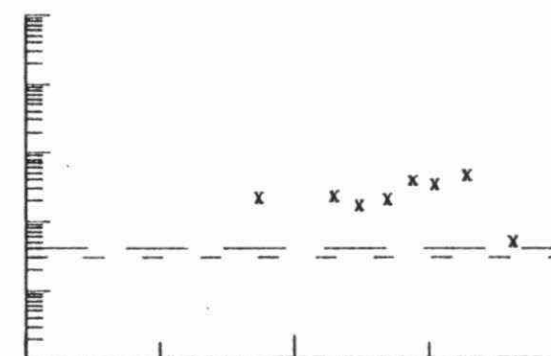
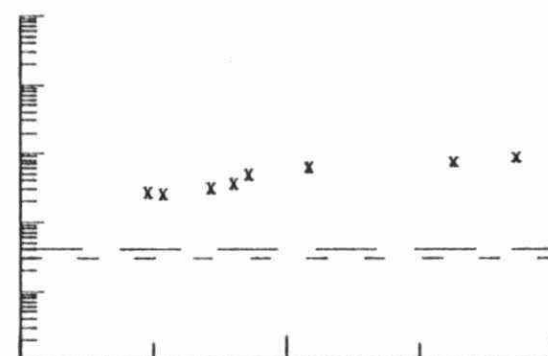
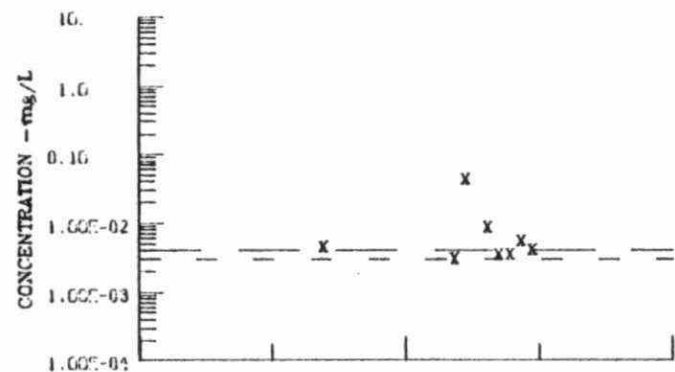




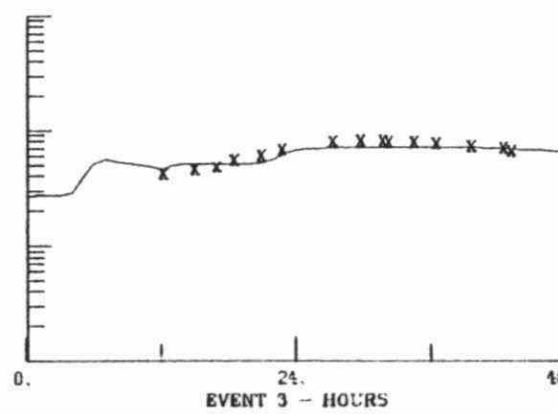
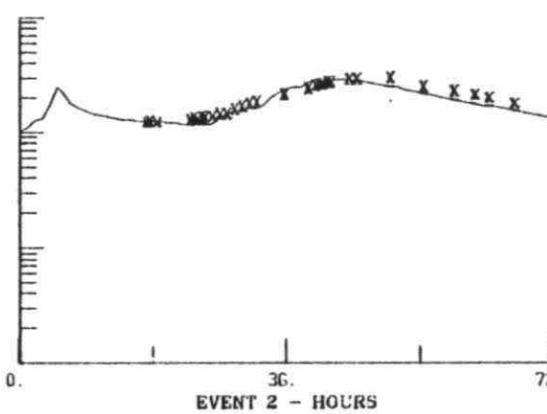
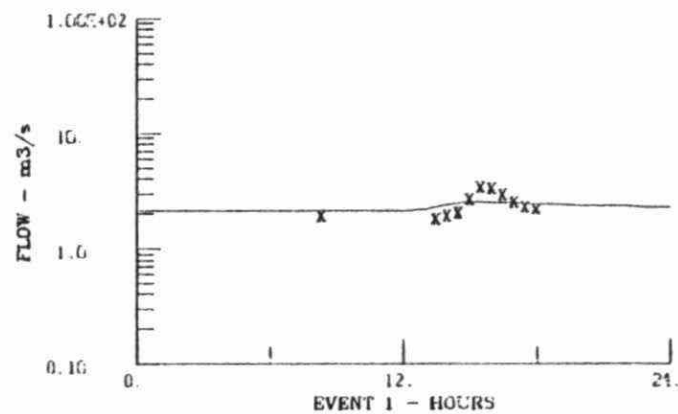
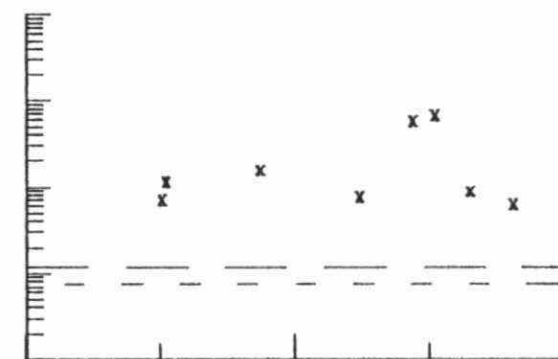
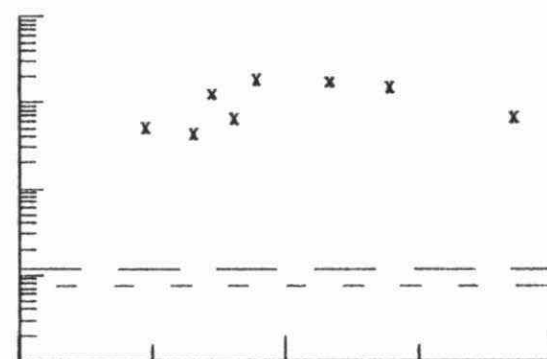
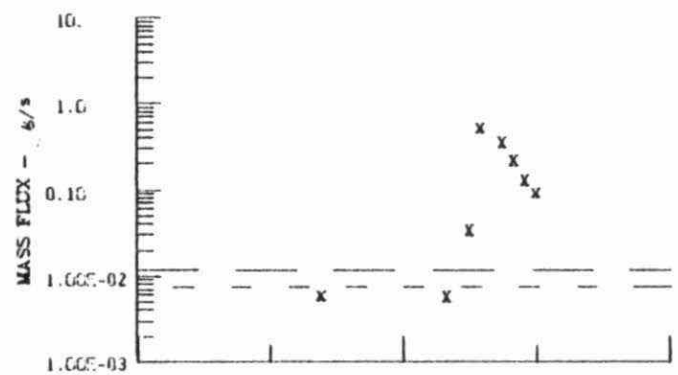
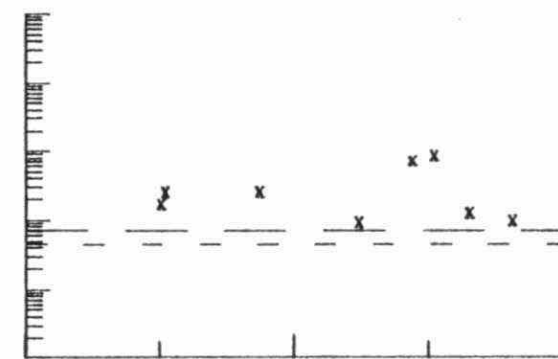
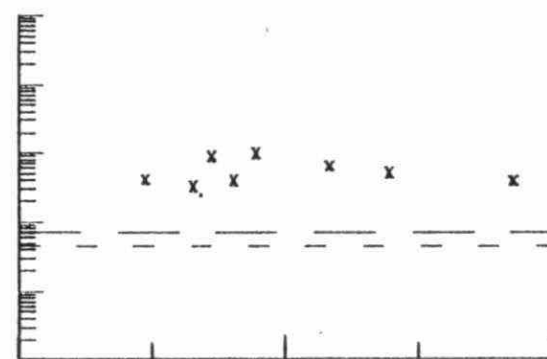
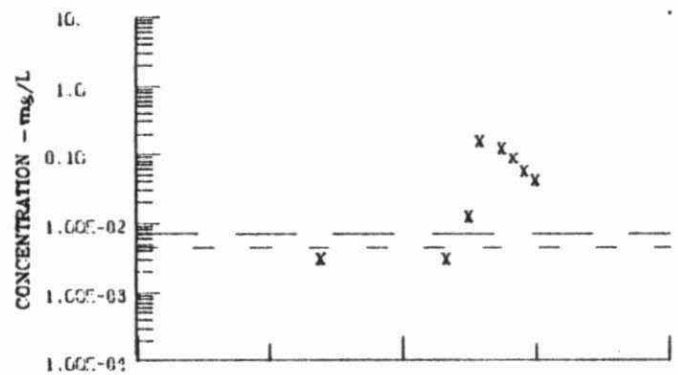


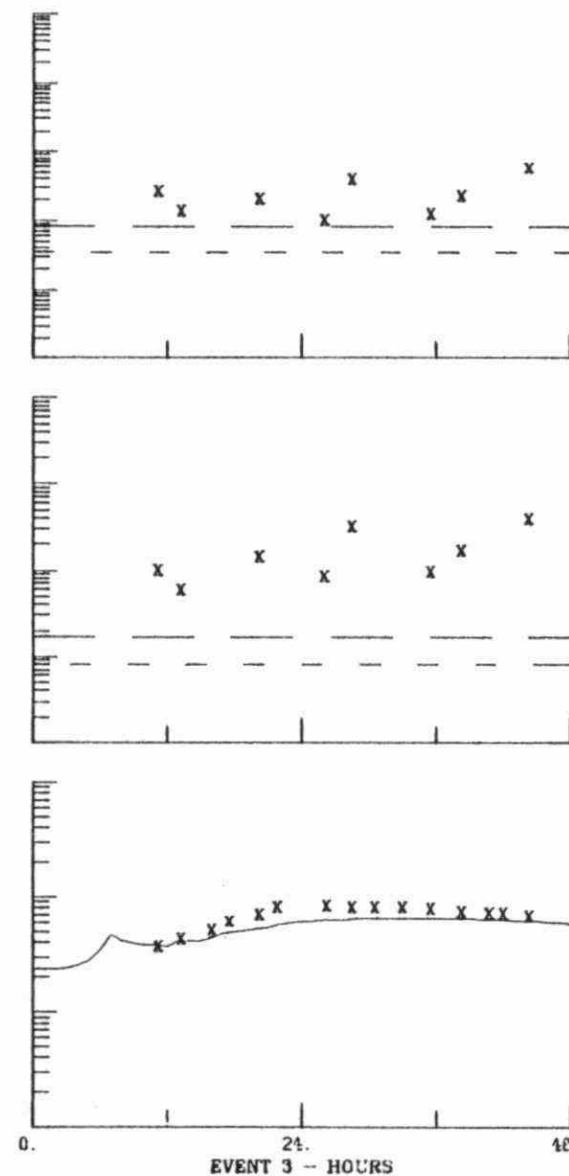
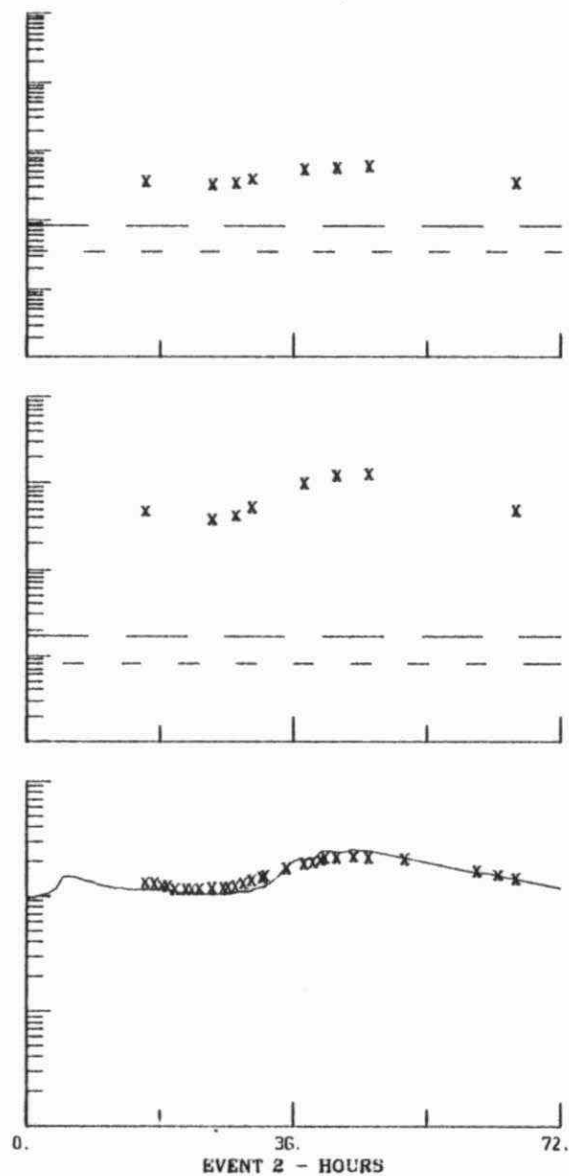
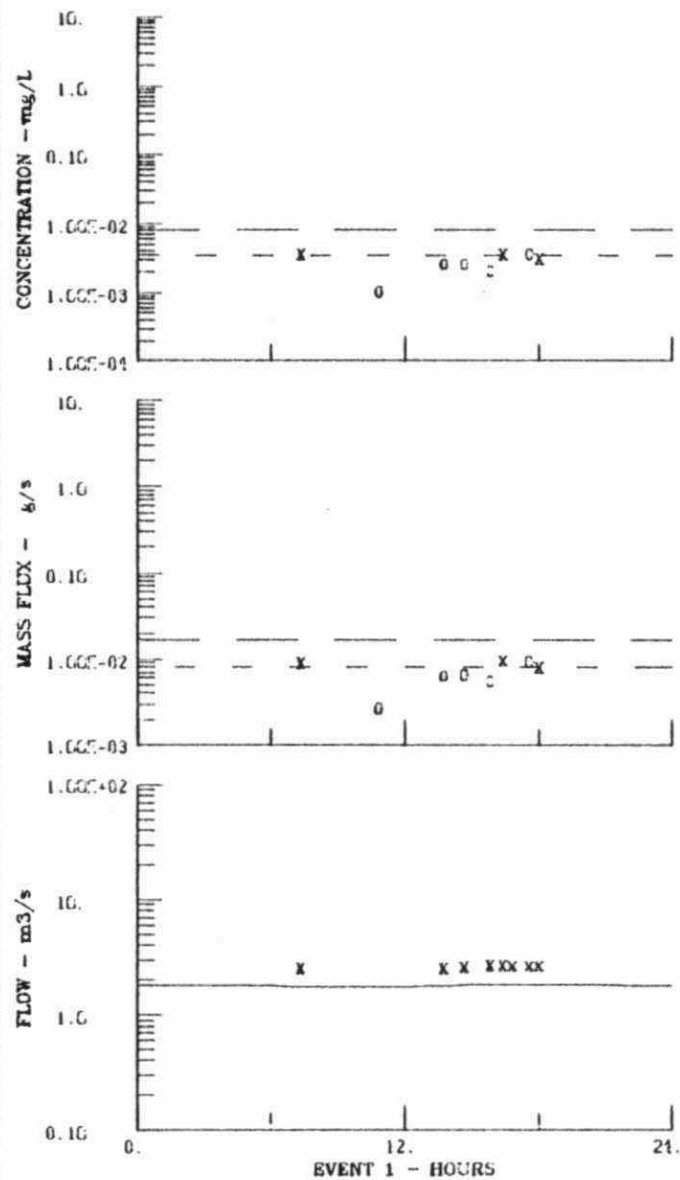
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - PHOSPHATES - FILT, REACT



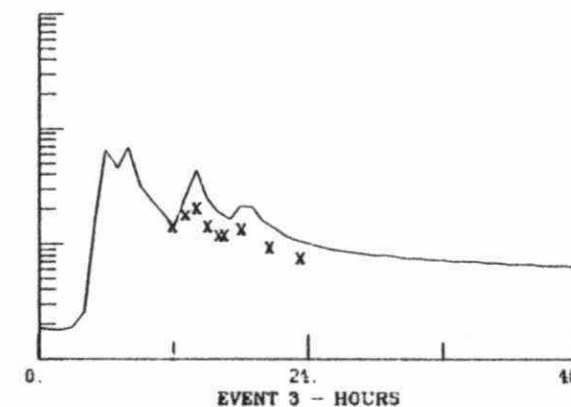
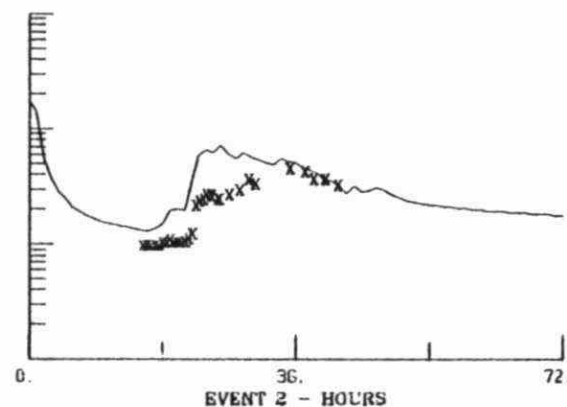
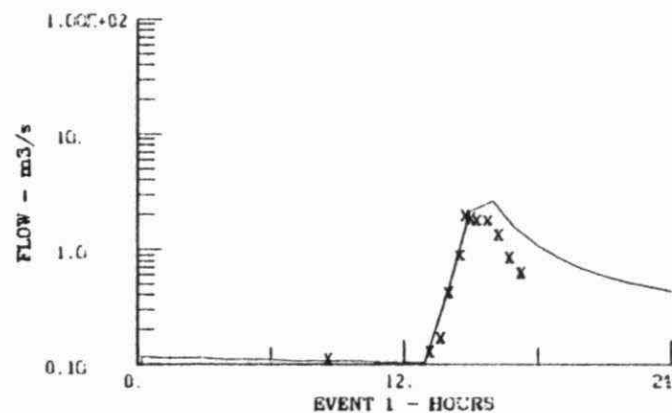
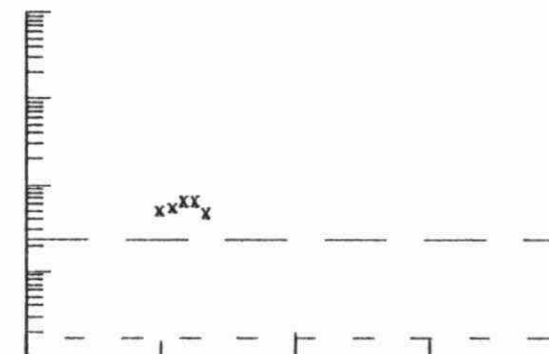
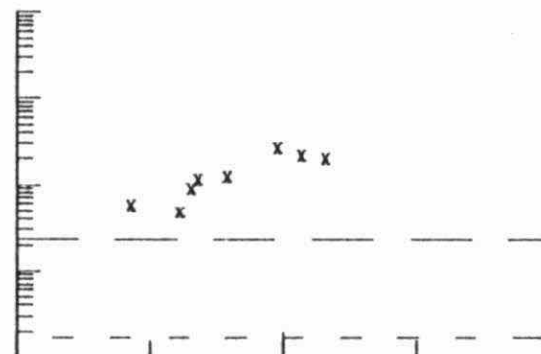
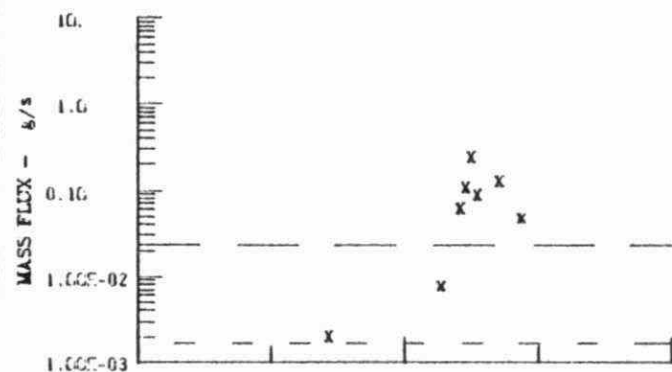
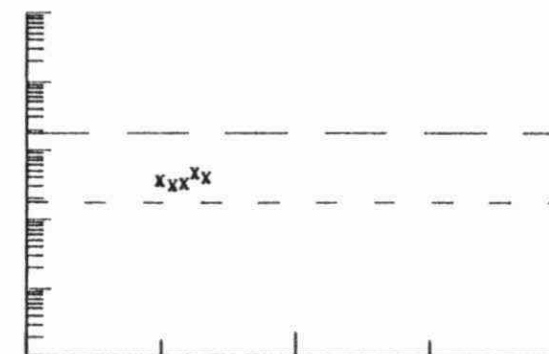
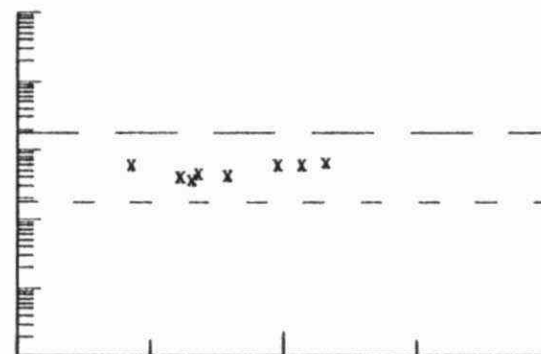
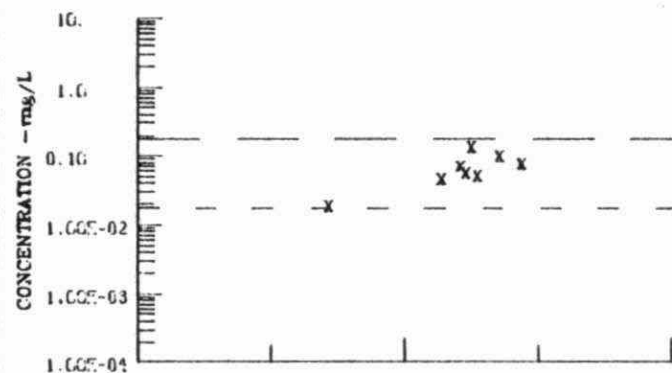


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - PHOSPHATES - FILT, REACT



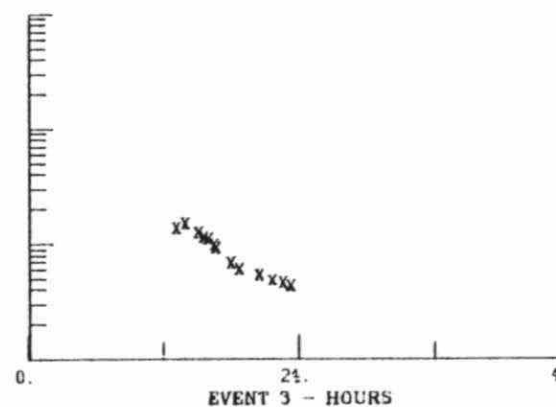
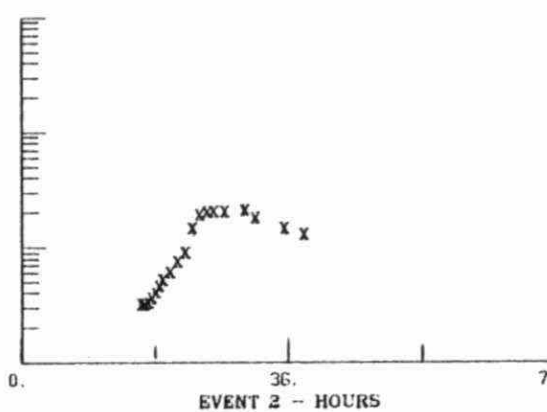
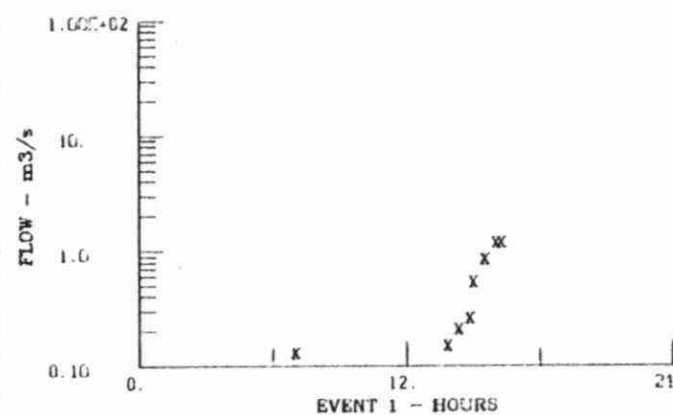
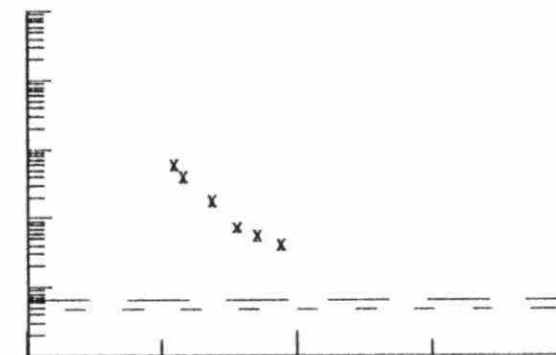
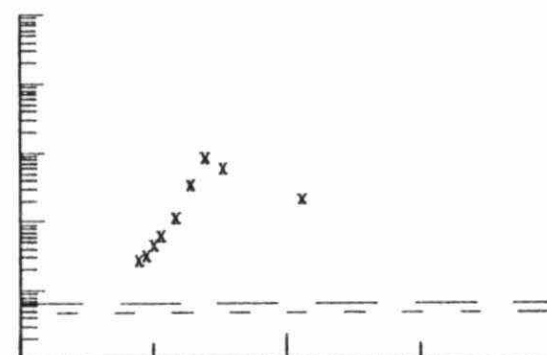
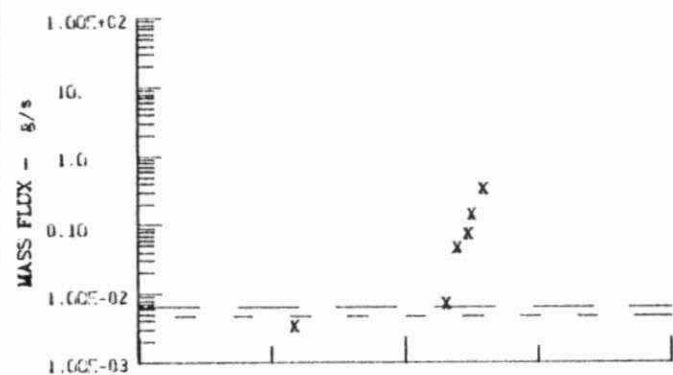
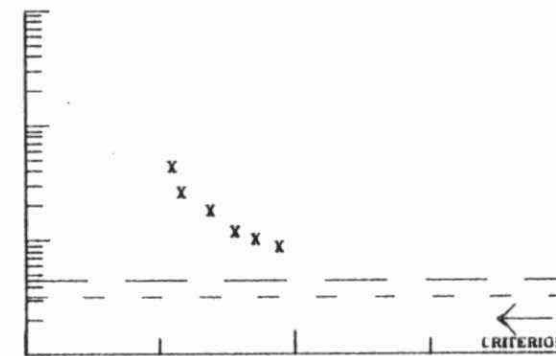
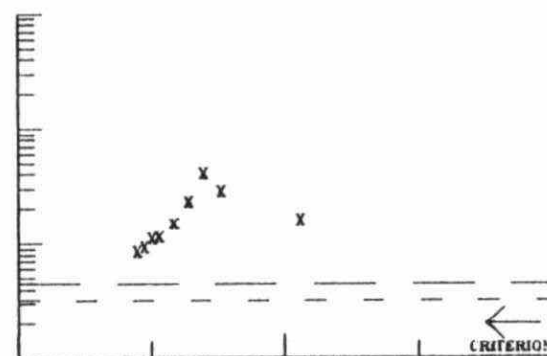
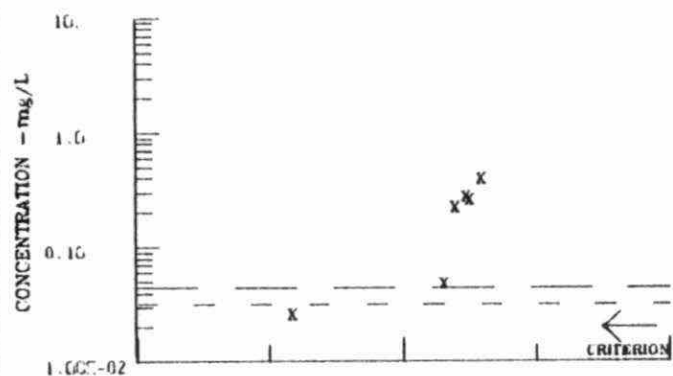


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - PHOSPHATES - FILT,REACT

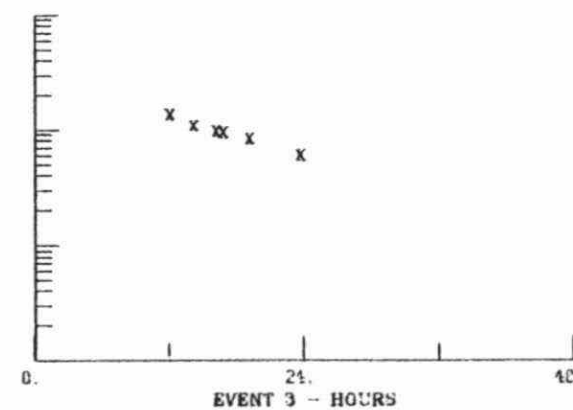
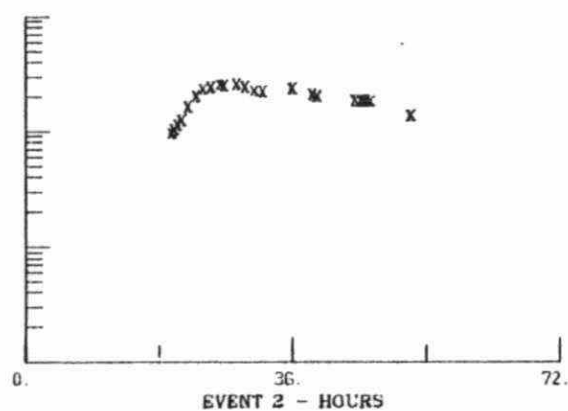
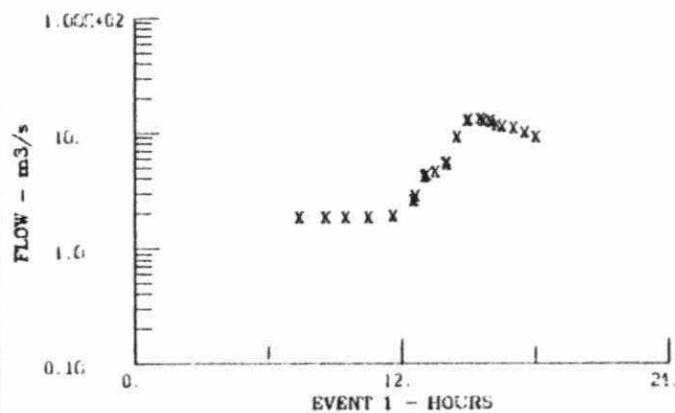
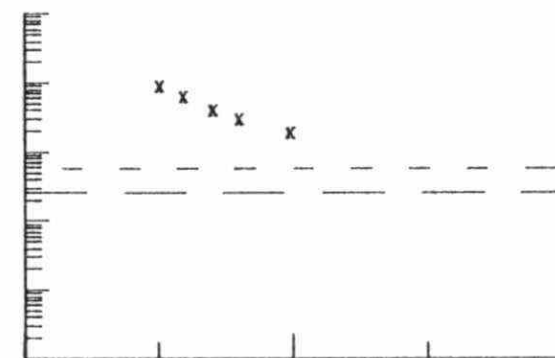
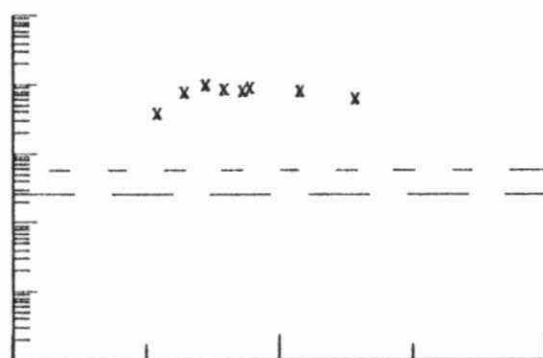
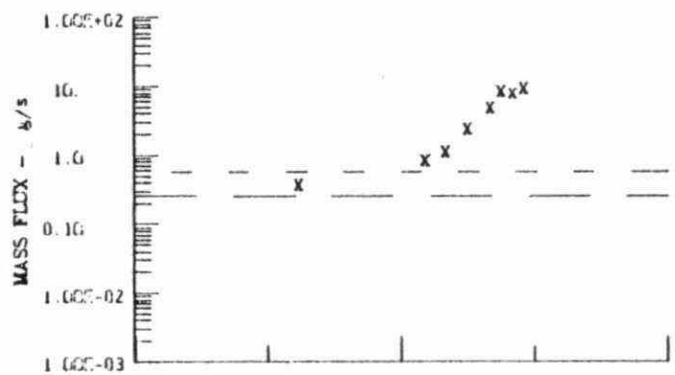
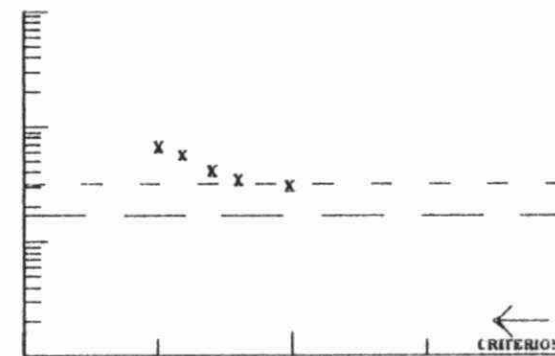
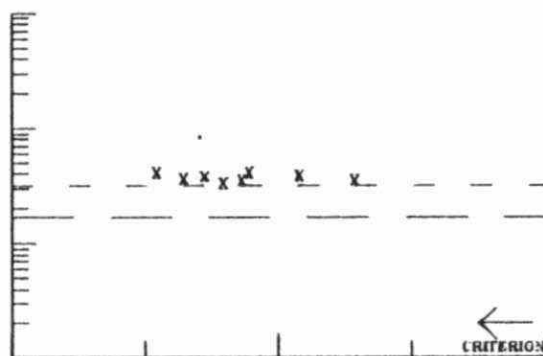
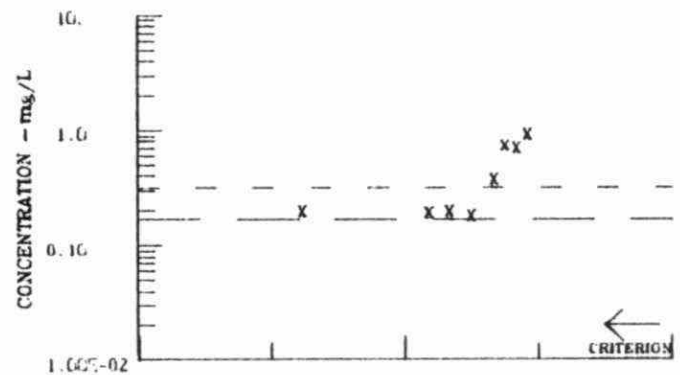


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - PHOSPHATES - FILT, REACT

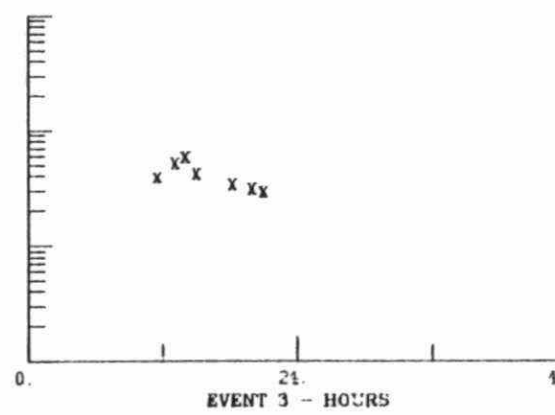
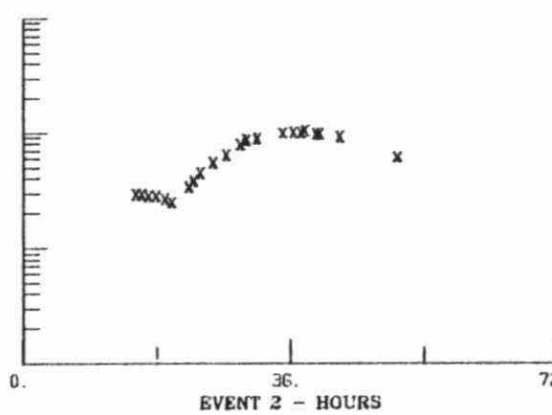
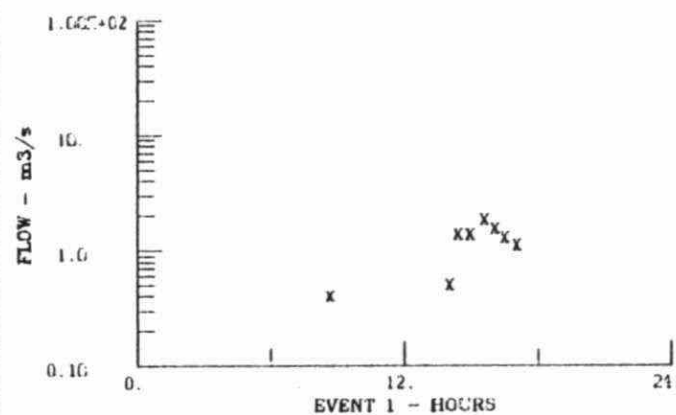
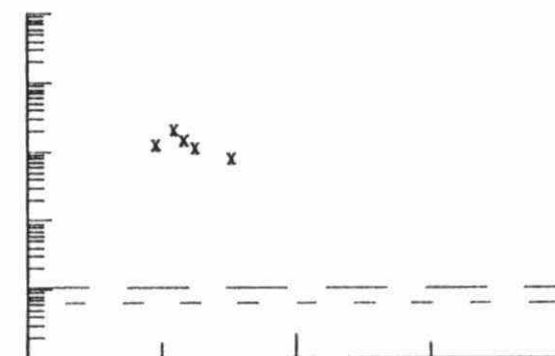
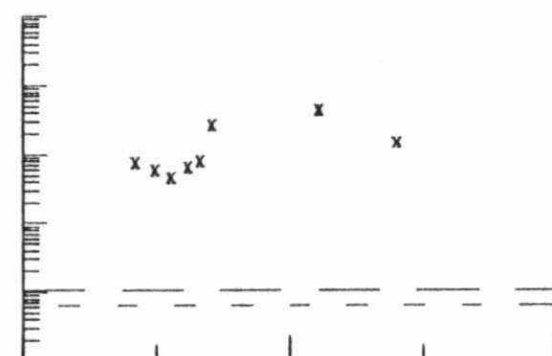
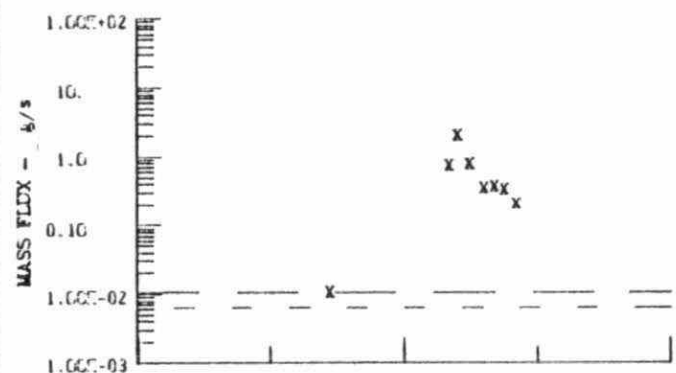
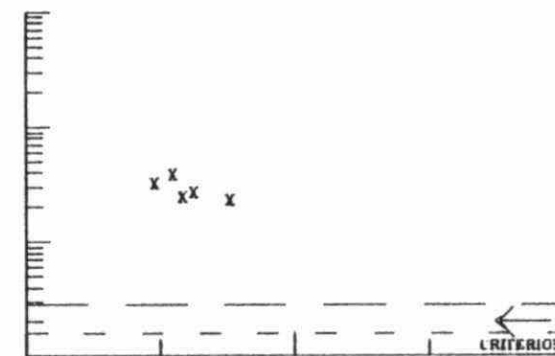
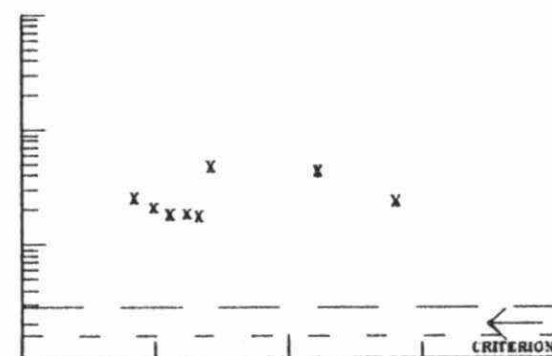
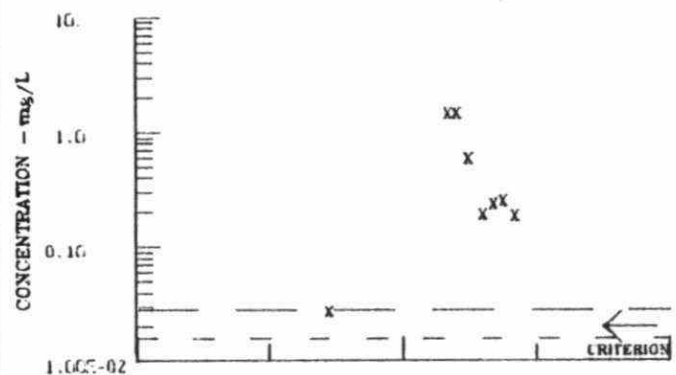
PHOSPHORUS, UNFILTERED TOTAL



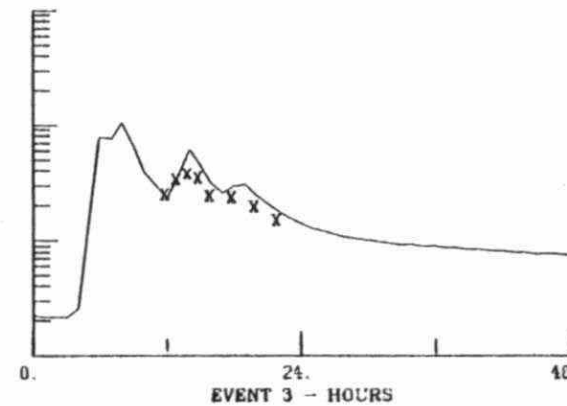
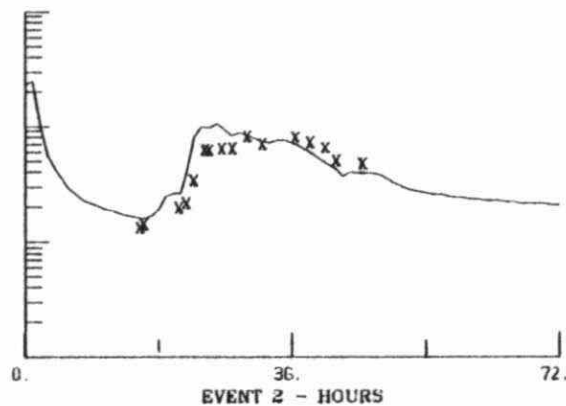
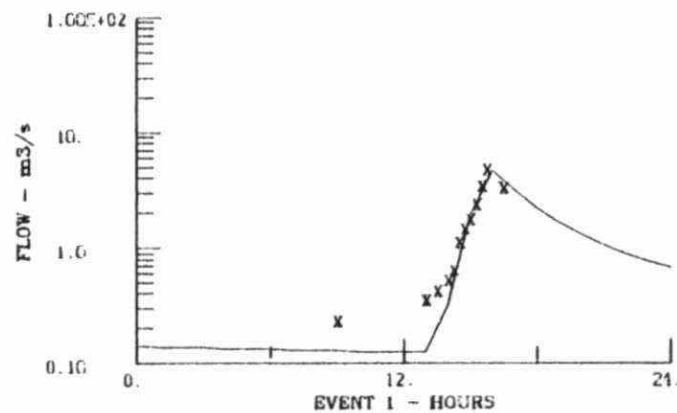
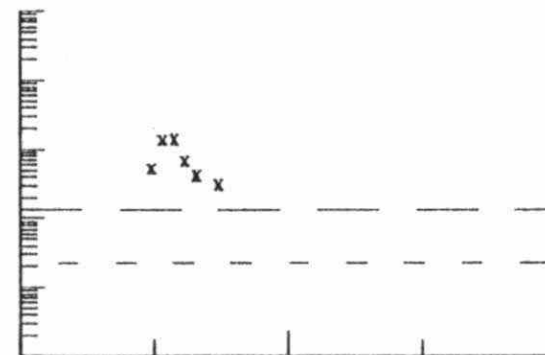
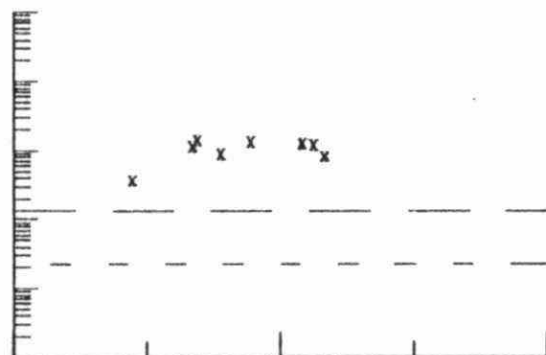
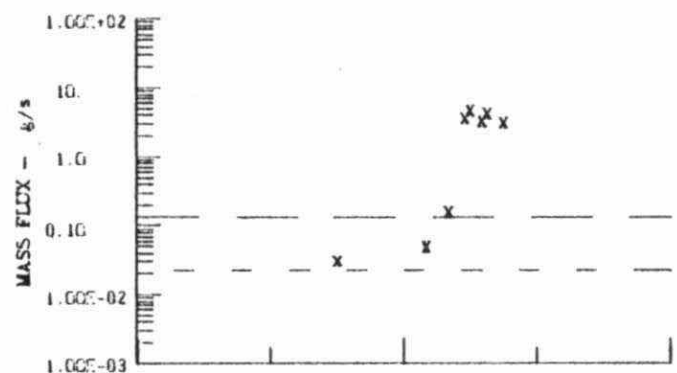
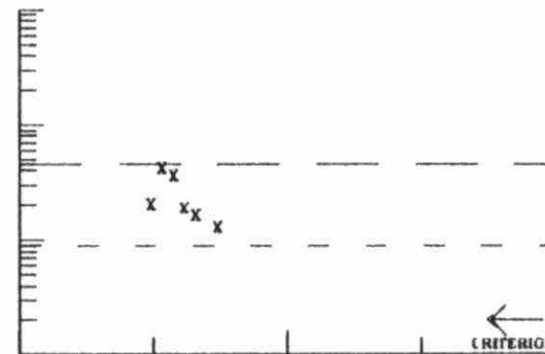
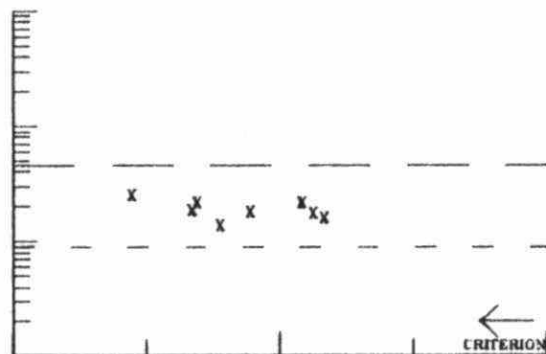
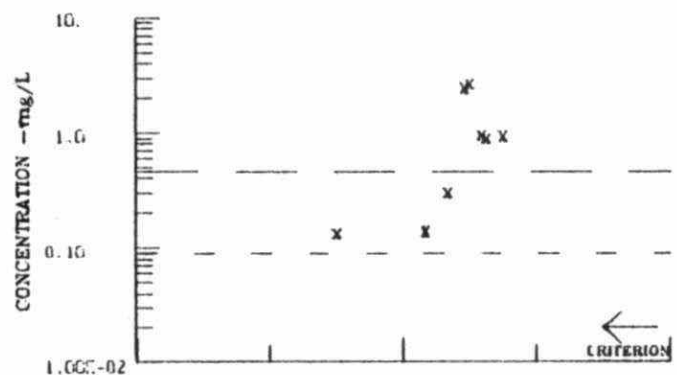
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - PHOSPHORUS - UNF, TOTAL



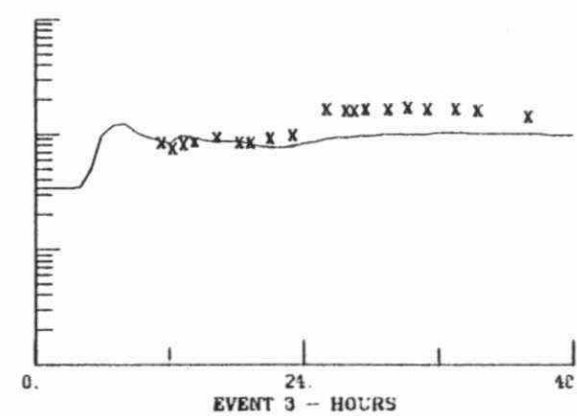
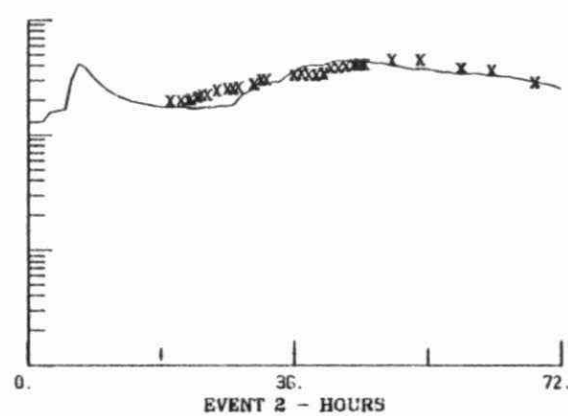
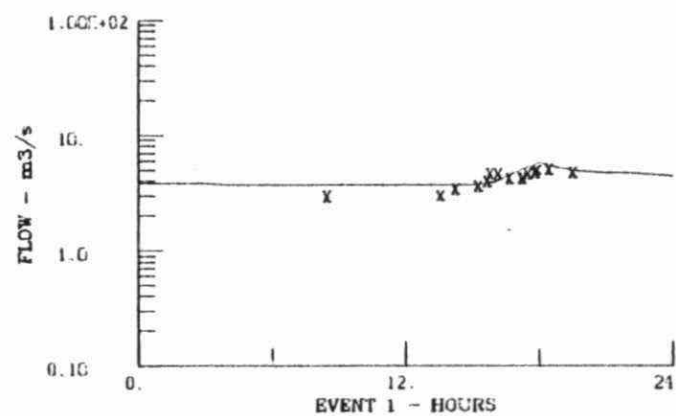
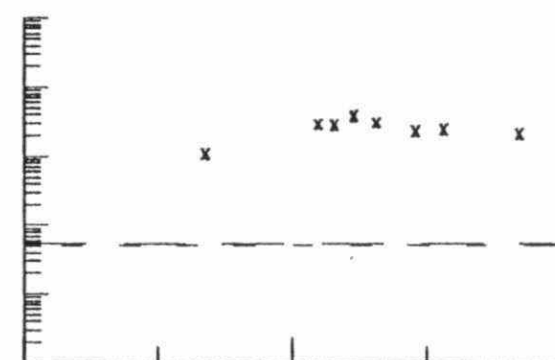
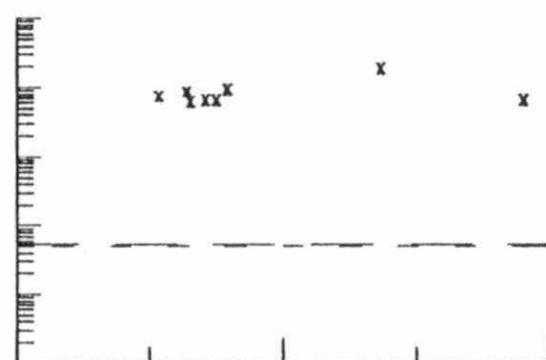
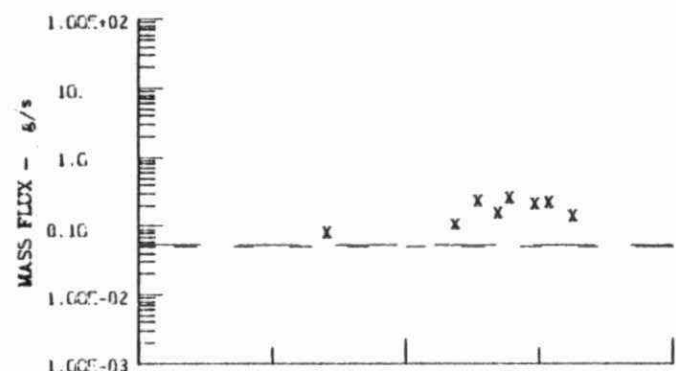
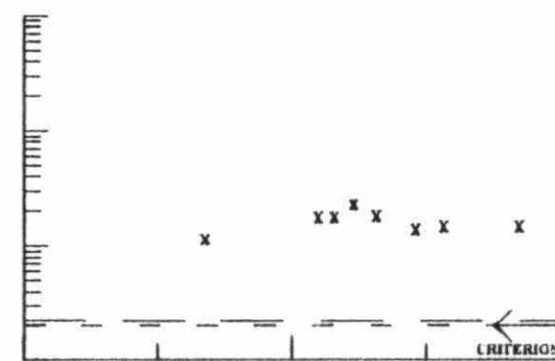
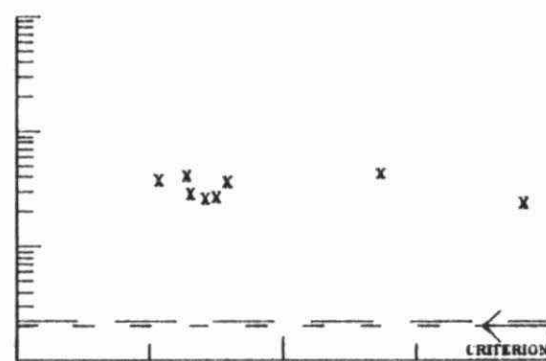
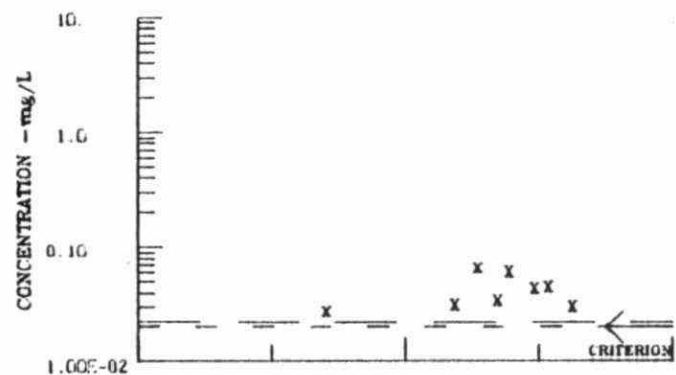
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - PHOSPHORUS - UNF,TOTAL



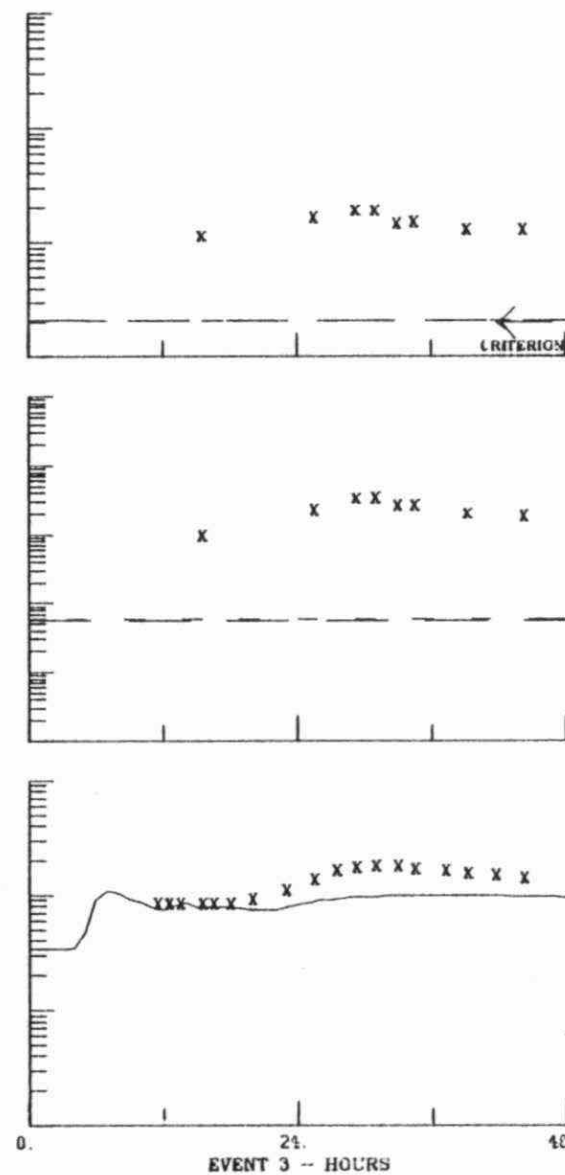
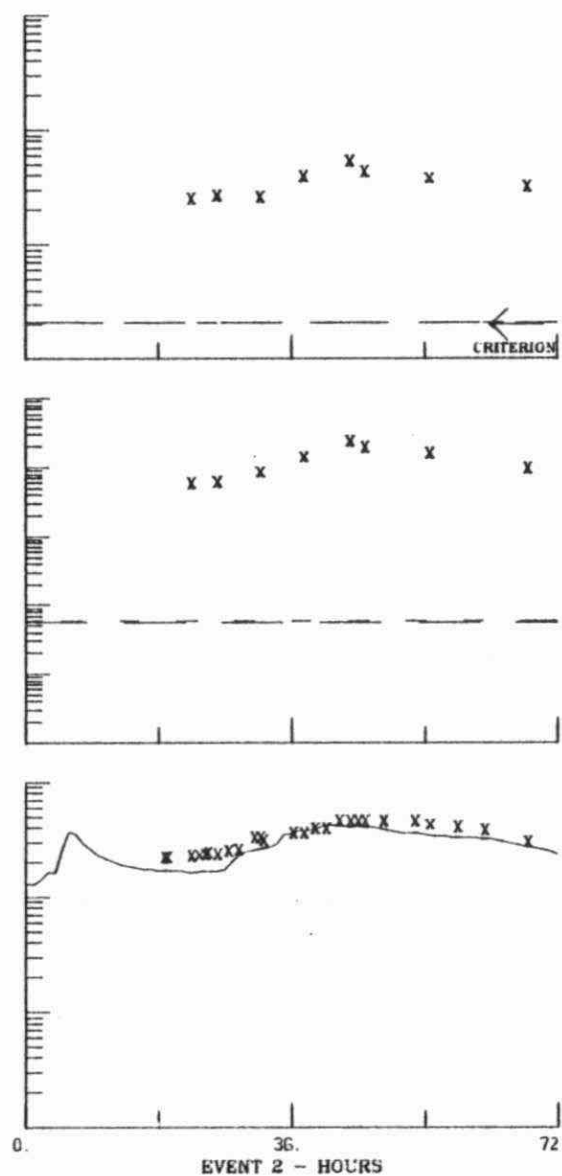
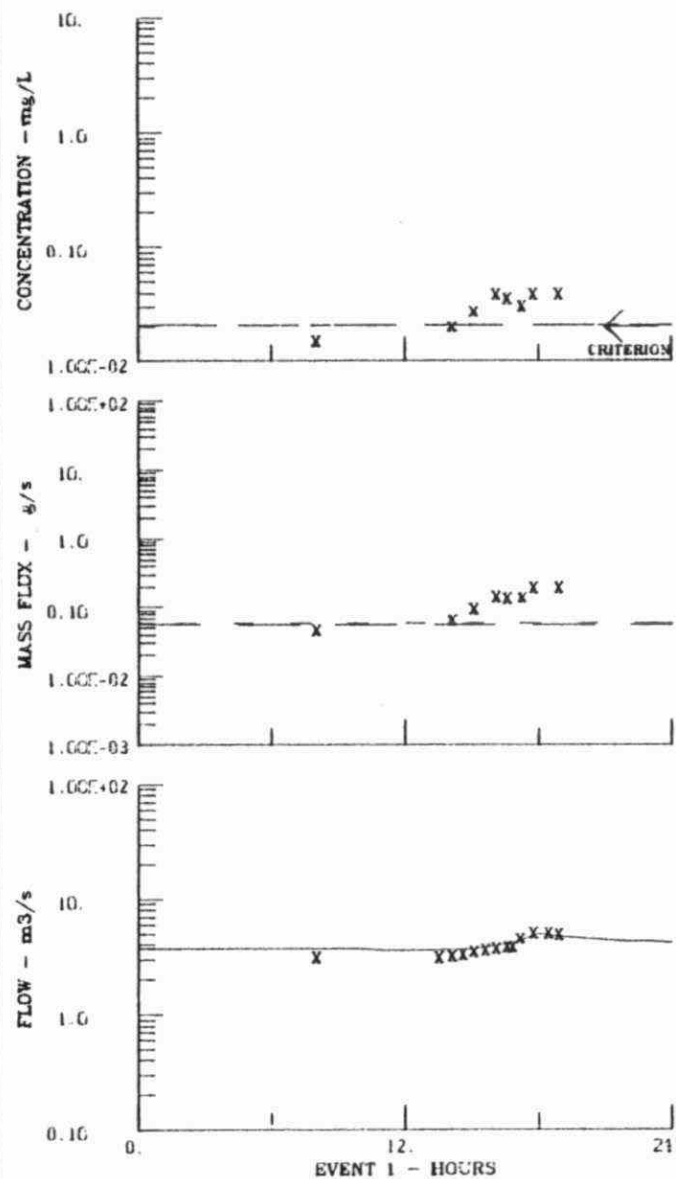
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - PHOSPHORUS - UNF,TOTAL



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - PHOSPHORUS - UNF, TOTAL

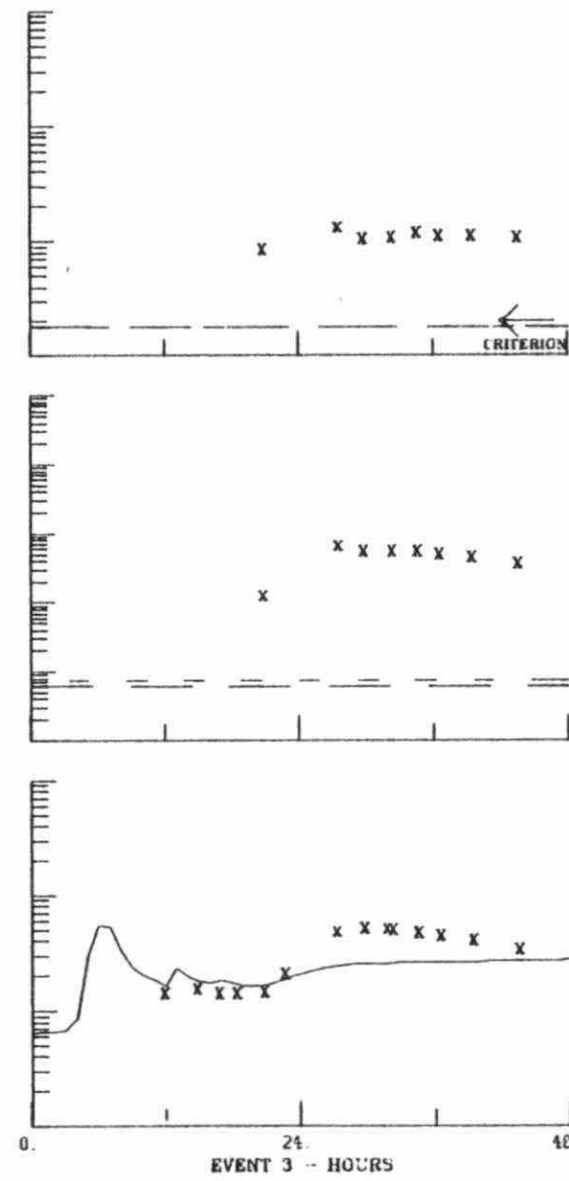
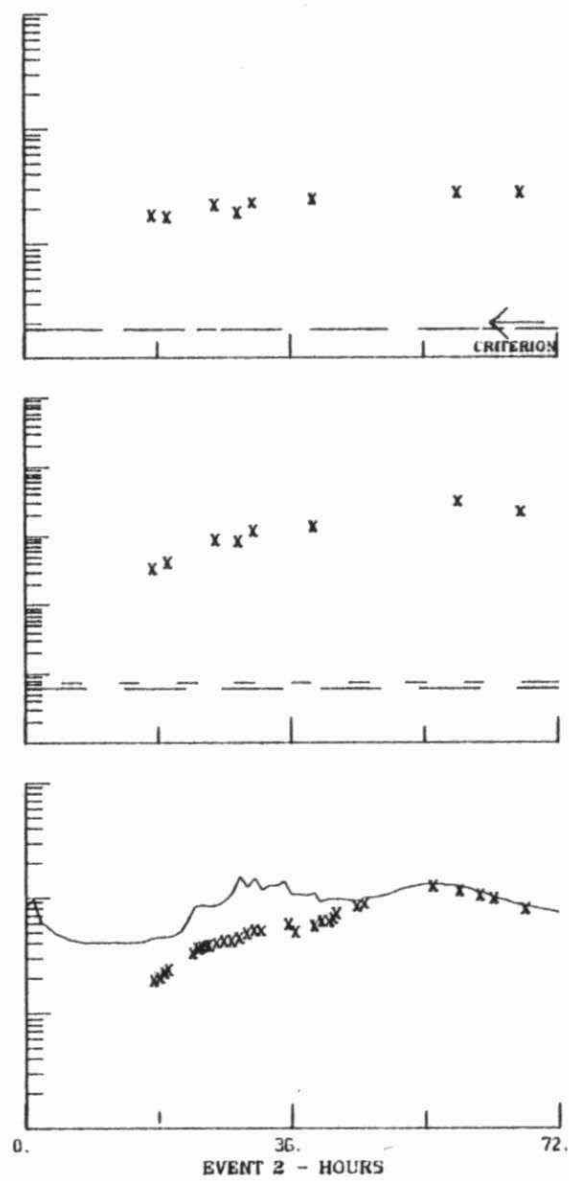
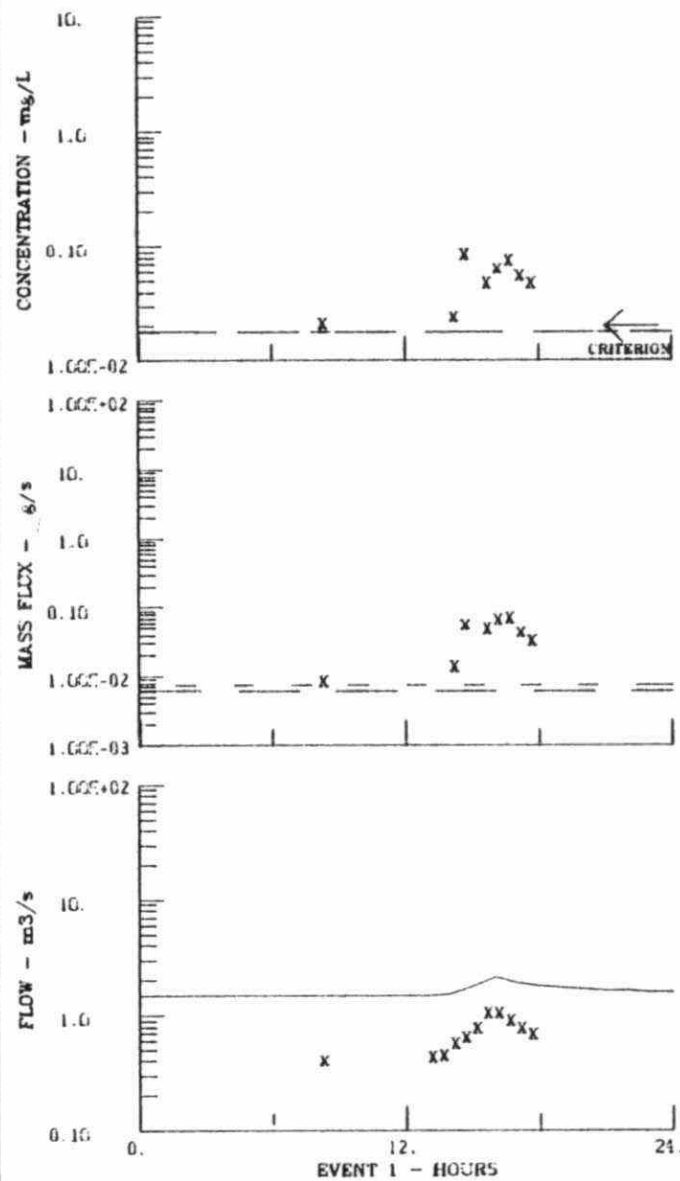


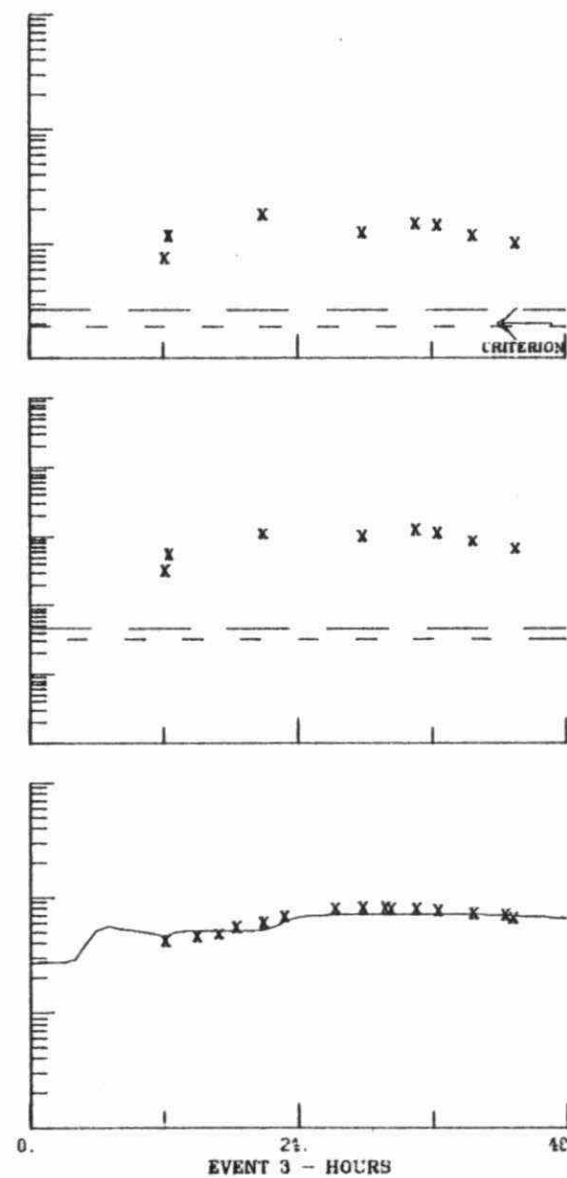
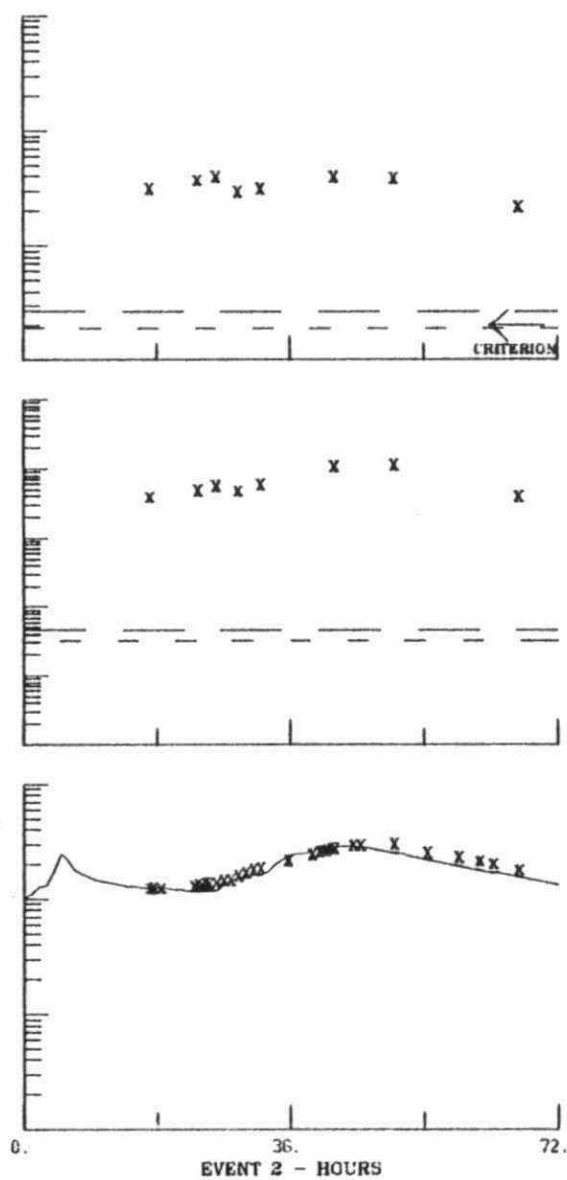
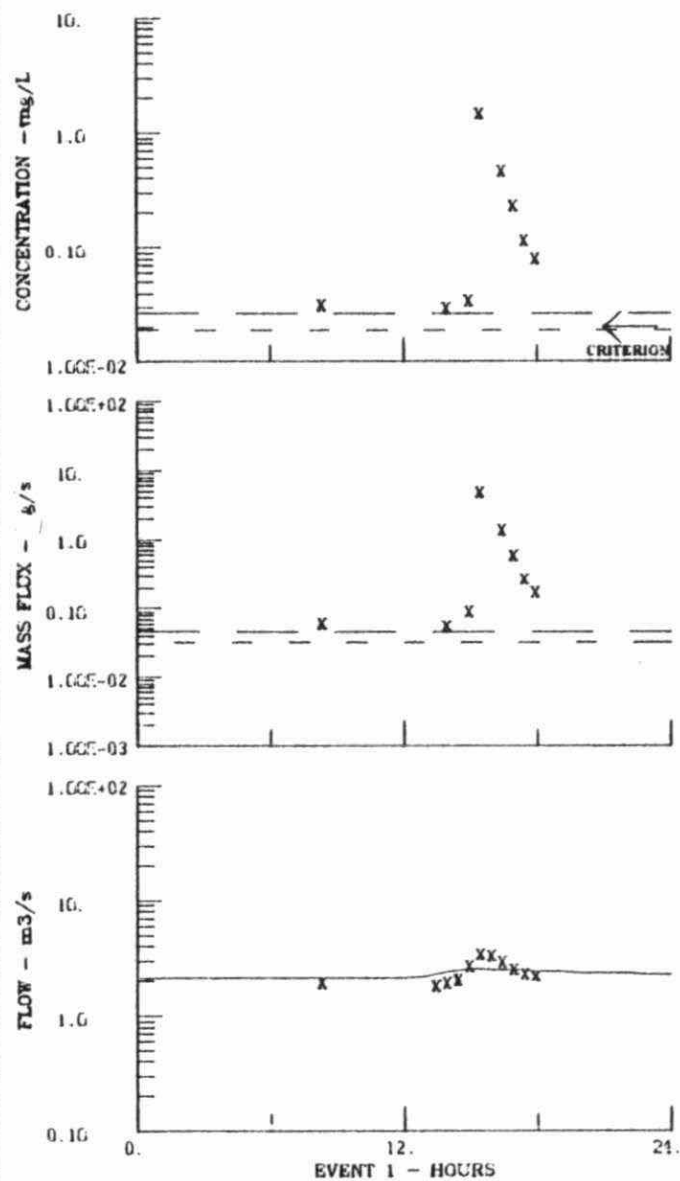
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - PHOSPHORUS - UNF,TOTAL



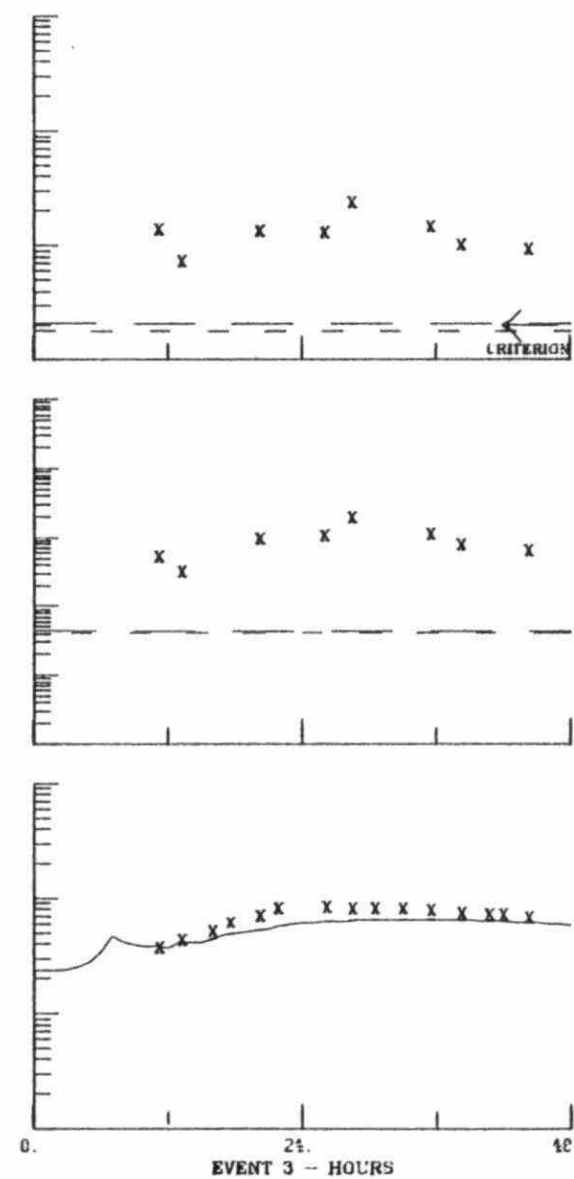
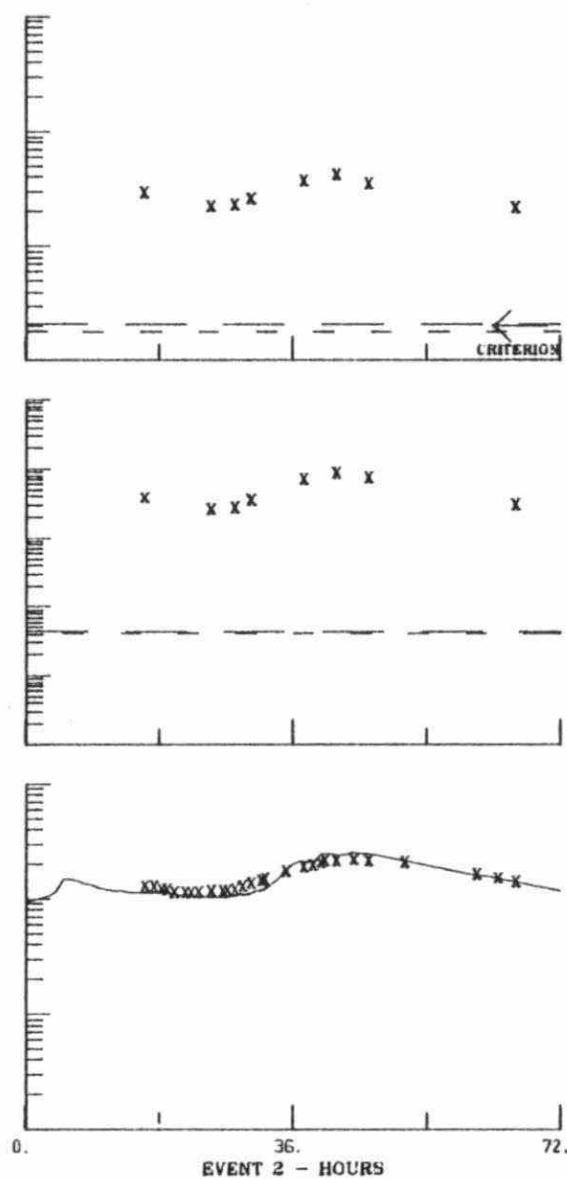
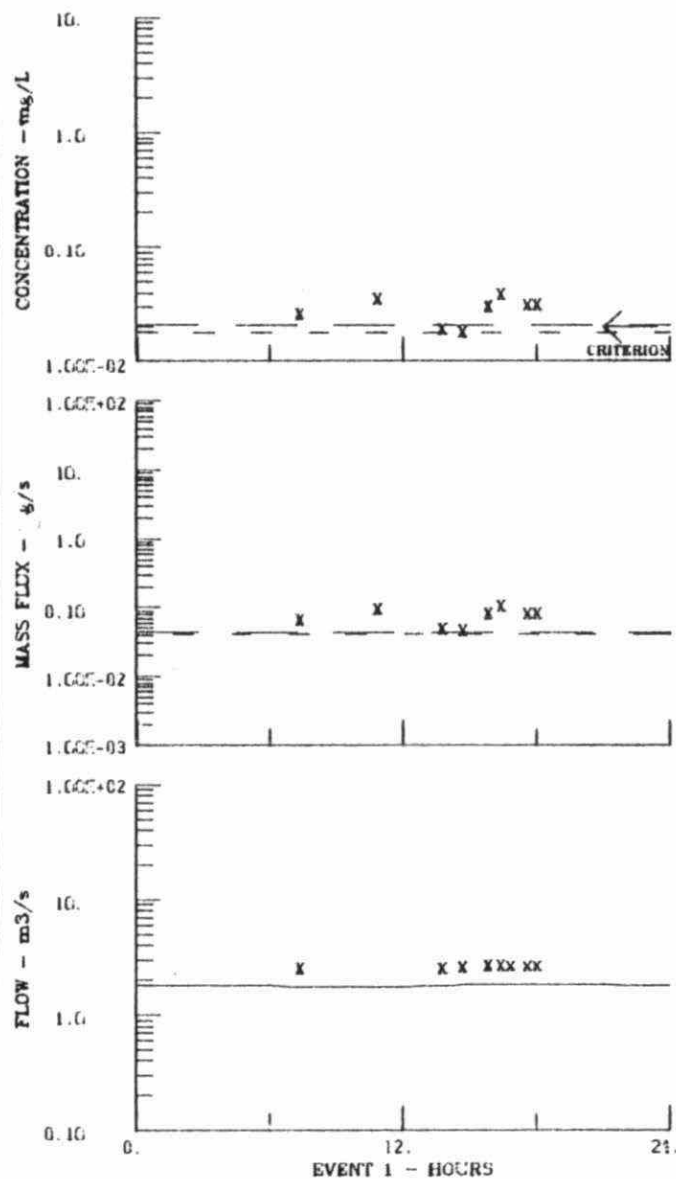
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2

SITE 7 - PHOSPHORUS - UNF, TOTAL

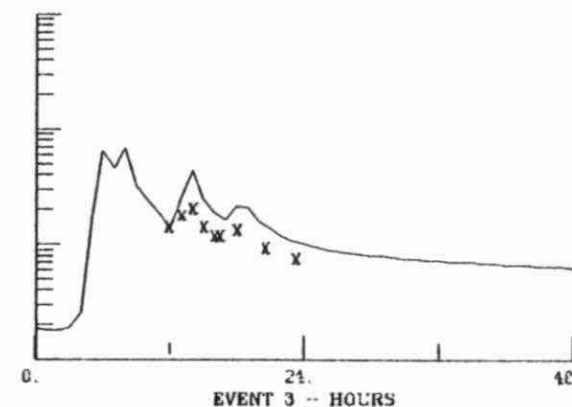
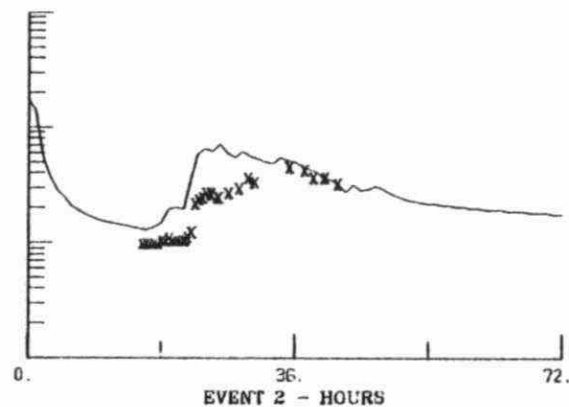
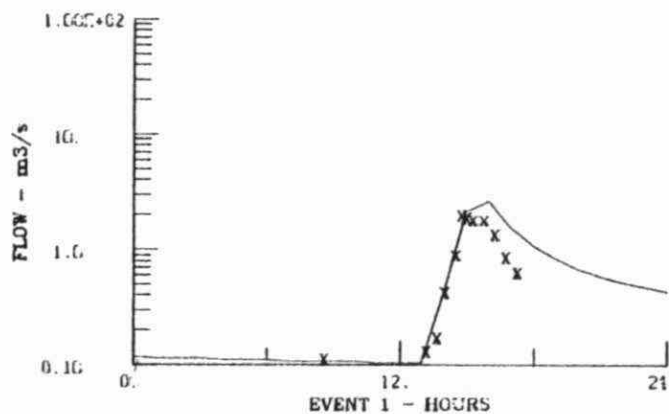
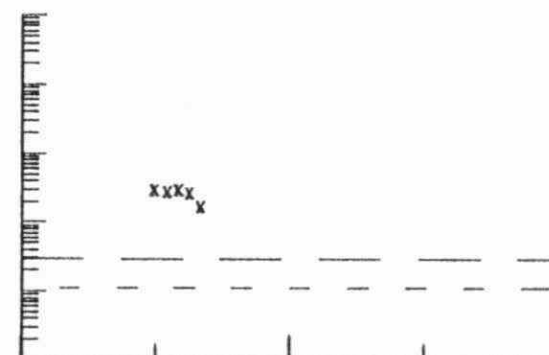
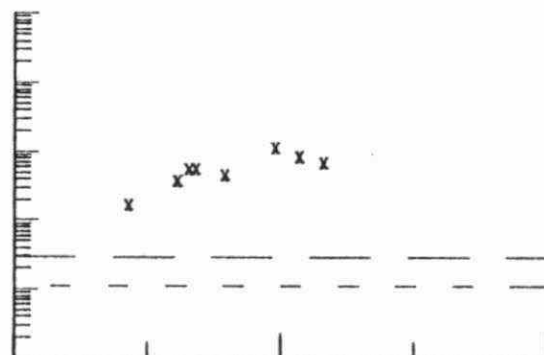
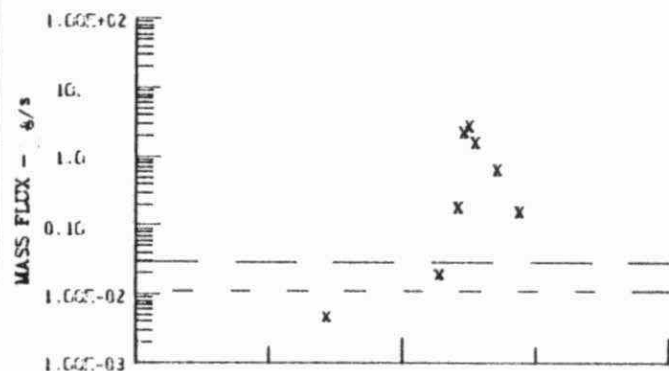
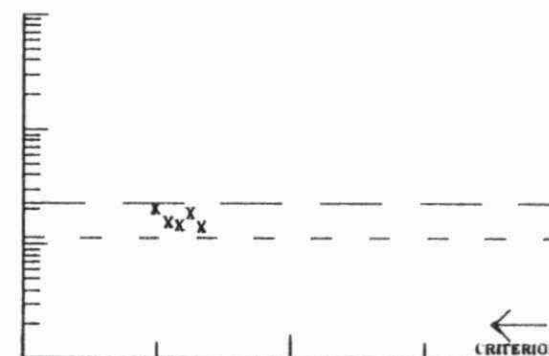
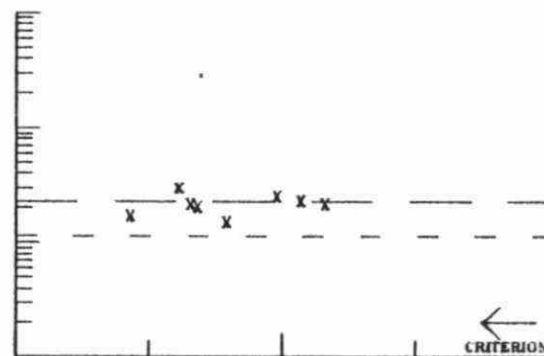
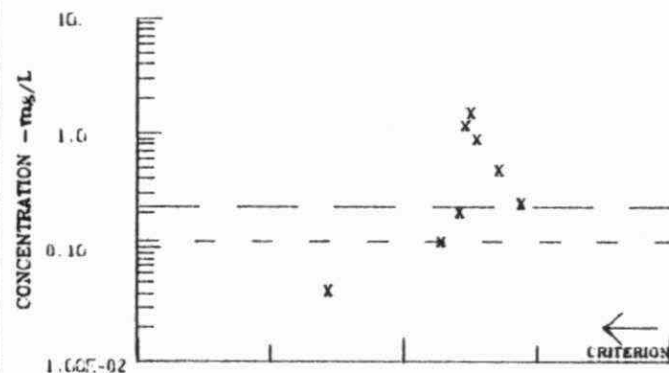




ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - PHOSPHORUS - UNF,TOTAL



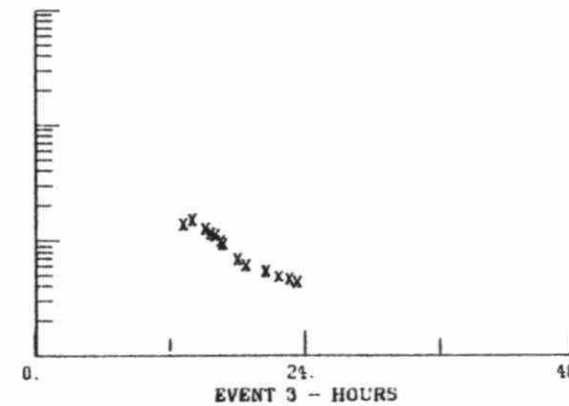
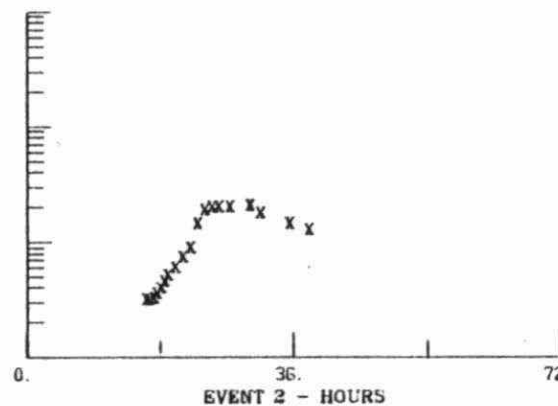
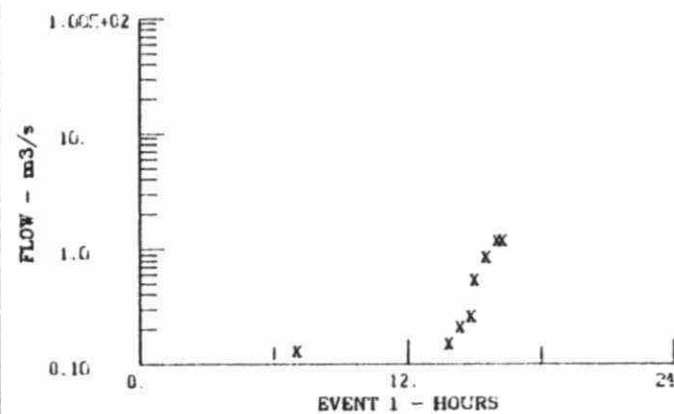
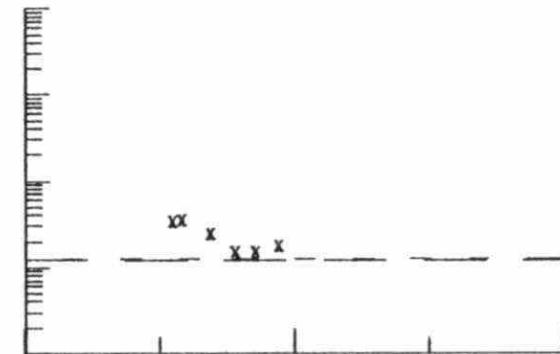
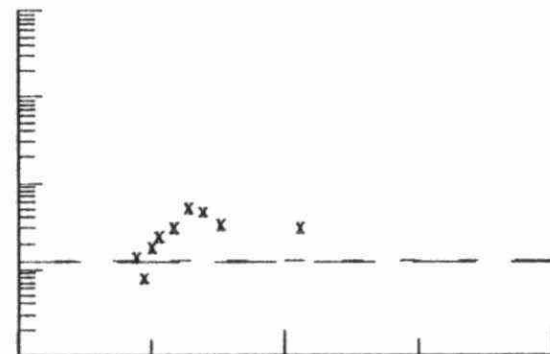
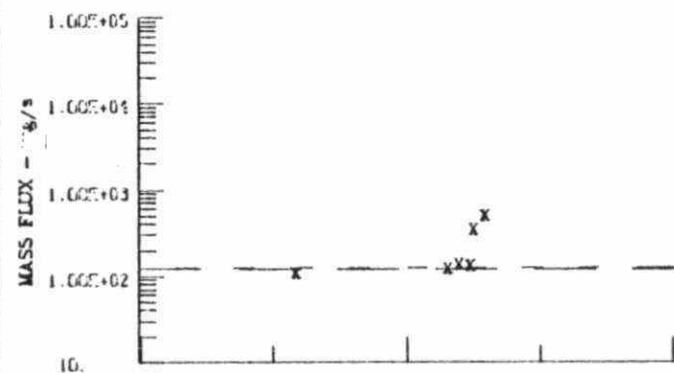
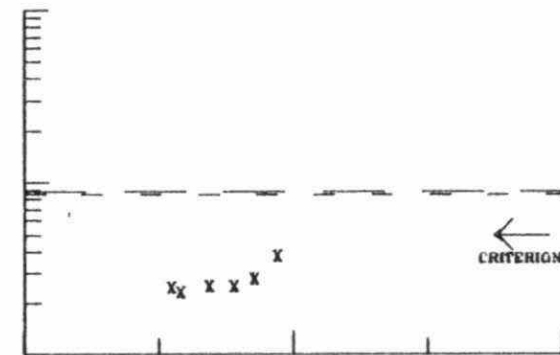
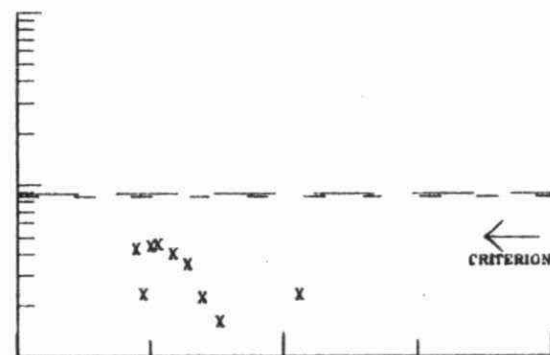
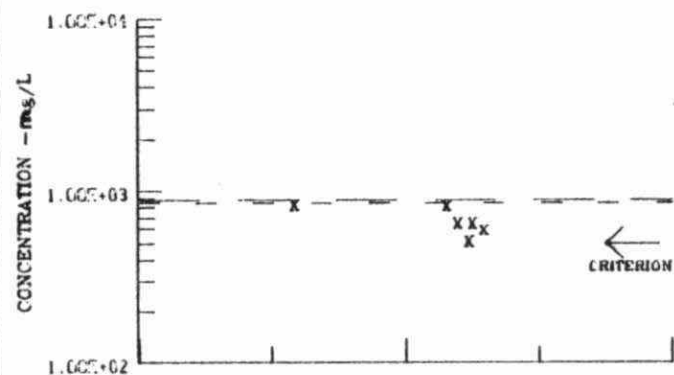
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - PHOSPHORUS - UNF,TOTAL



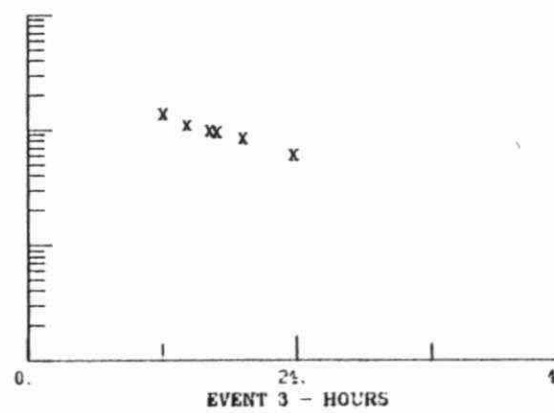
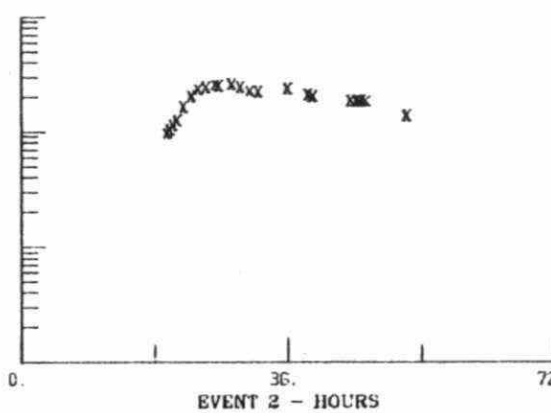
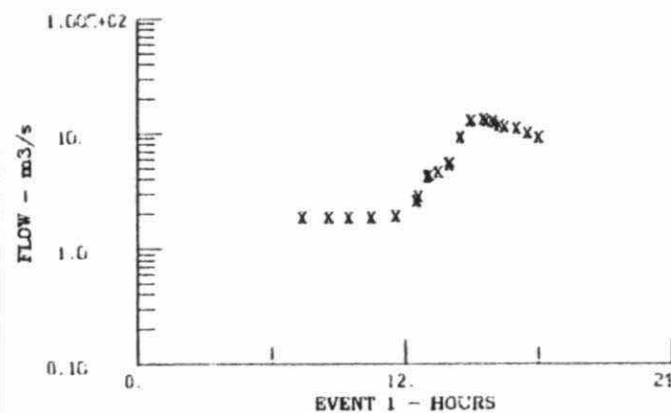
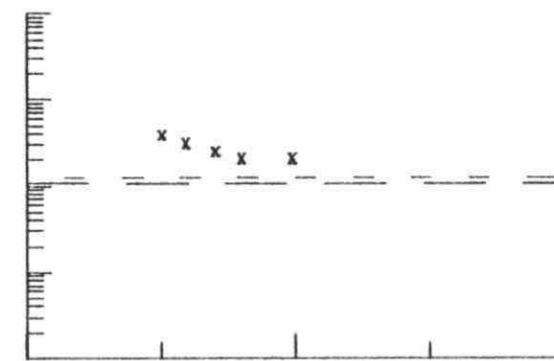
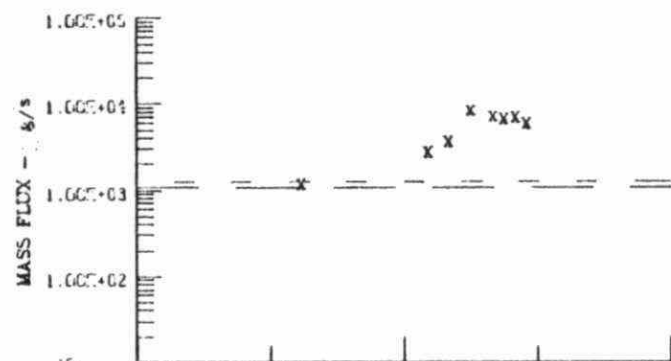
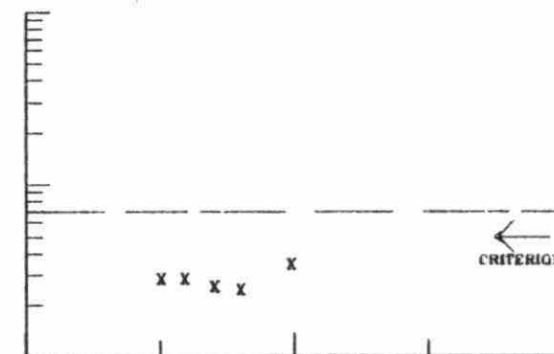
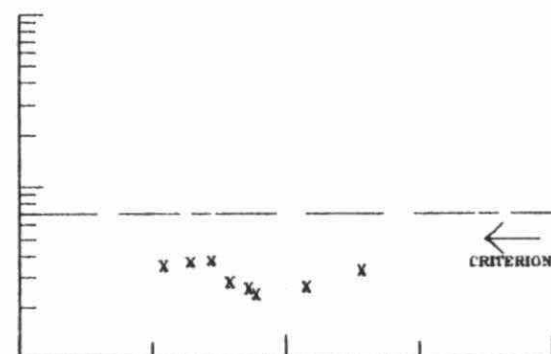
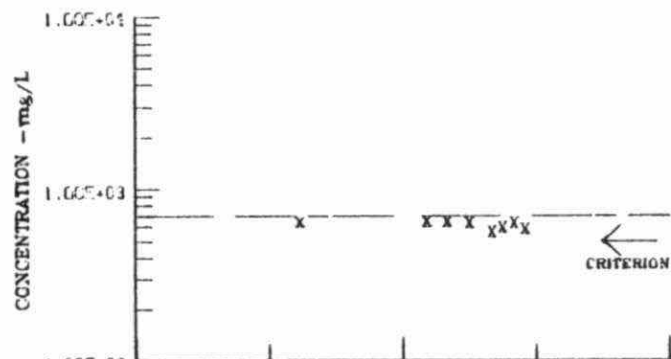
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2

SITE 11 - PHOSPHORUS - UNF,TOTAL

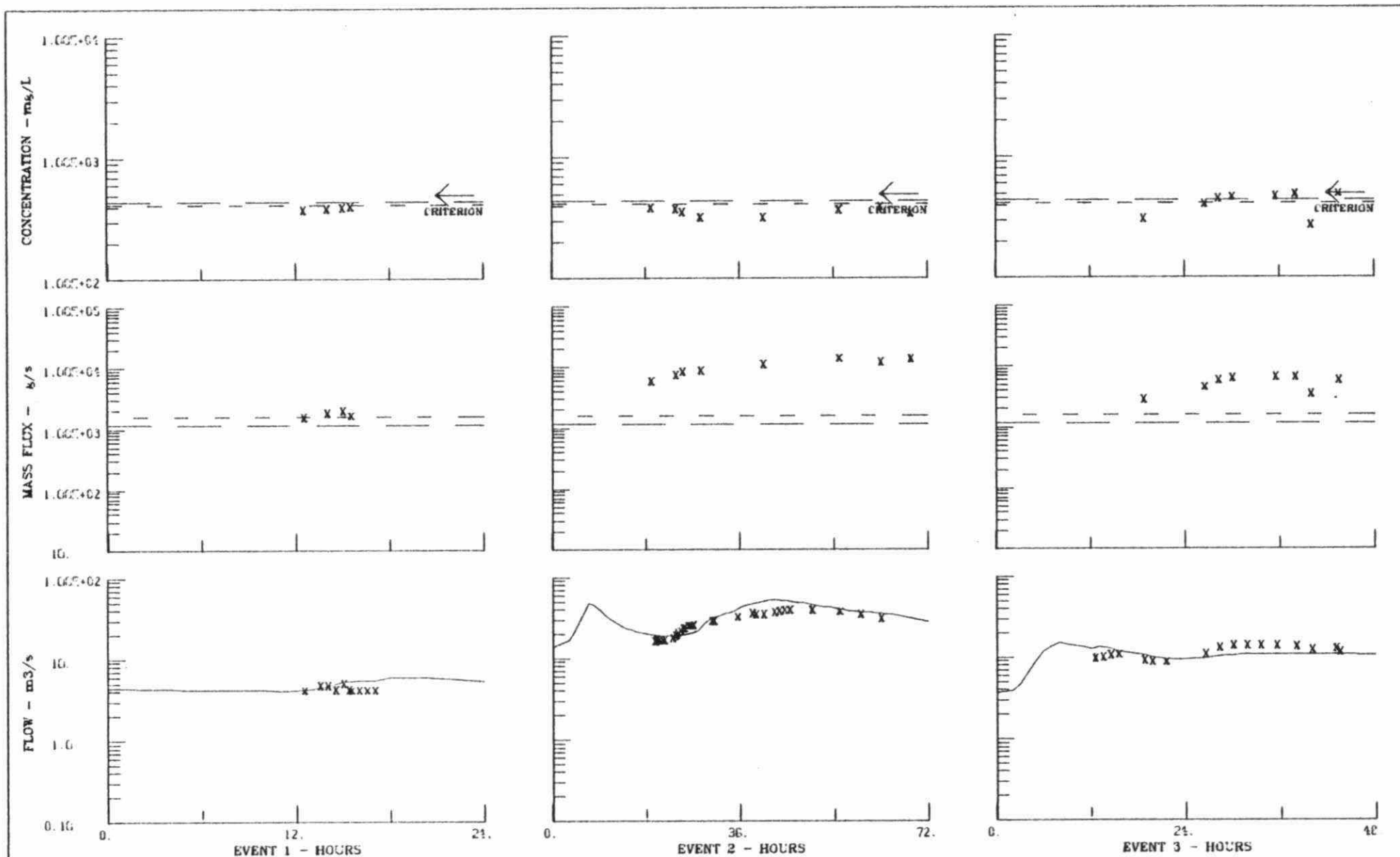
RESIDUE, FILTRATE



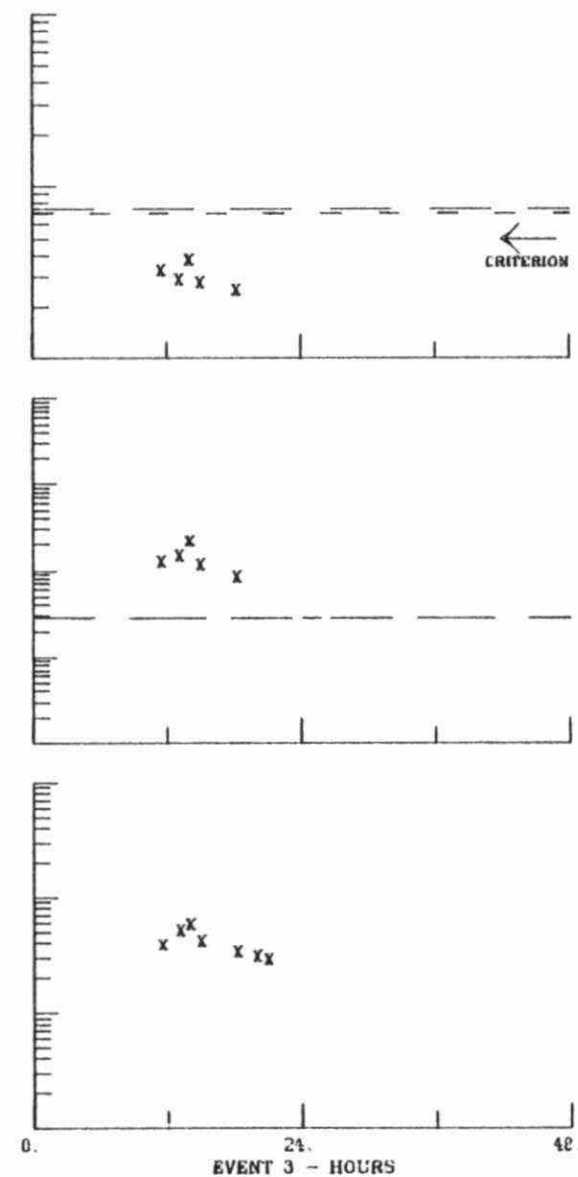
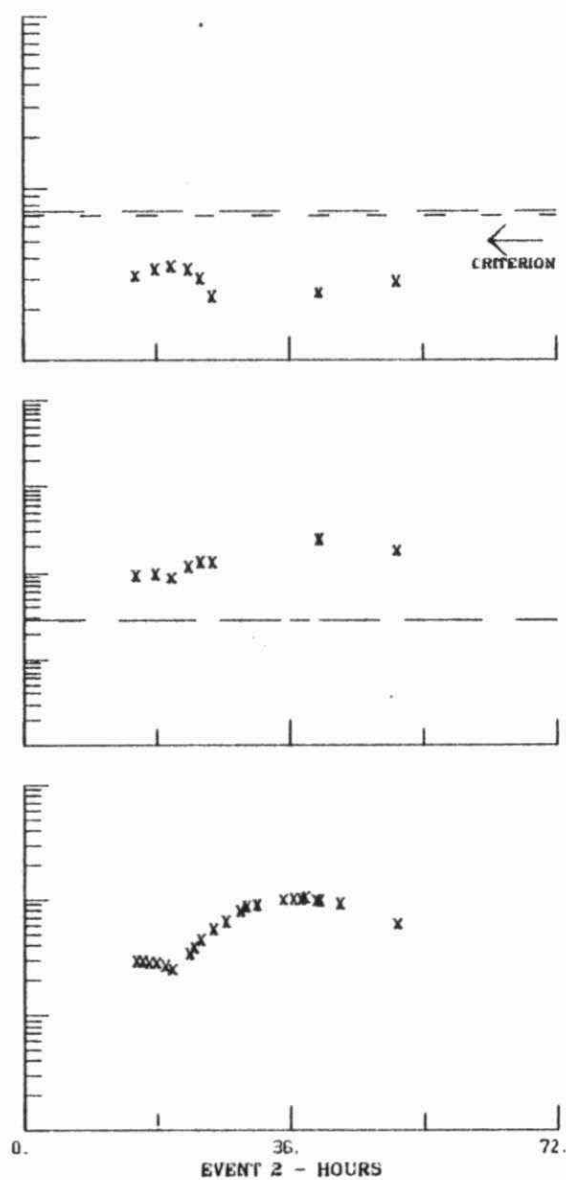
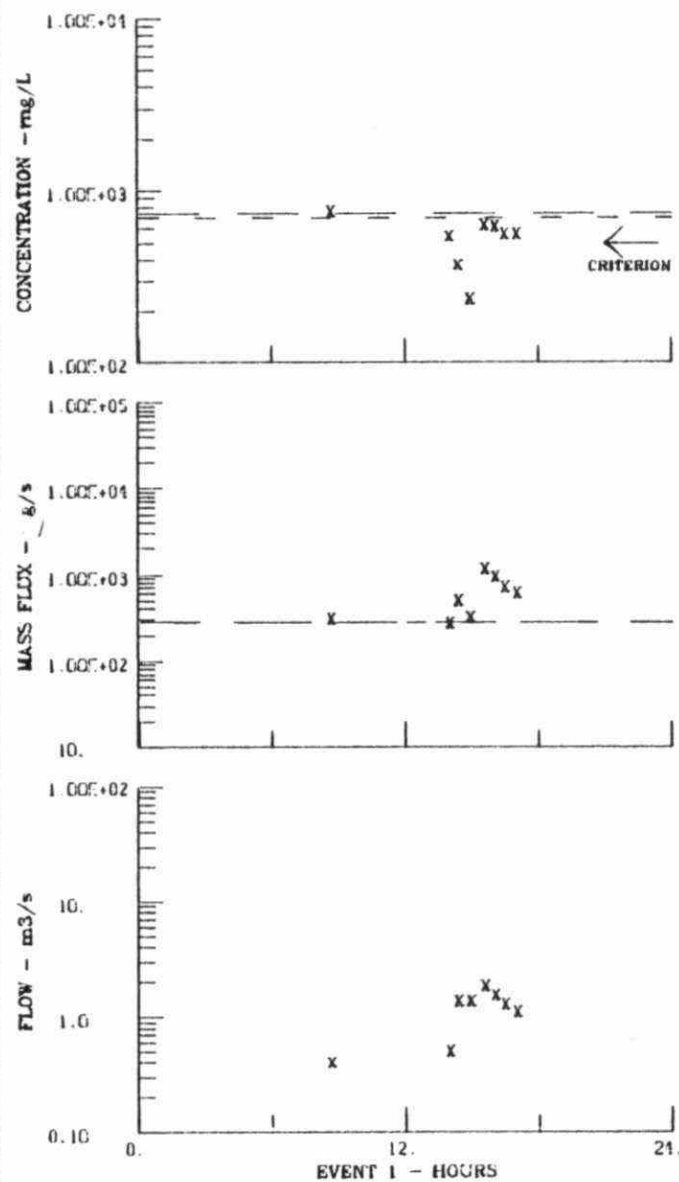
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - RESIDUE - FILTRATE



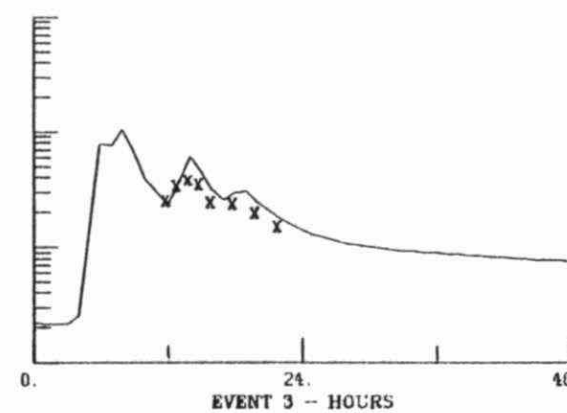
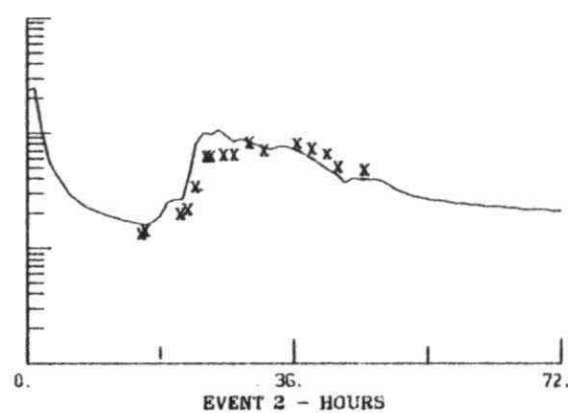
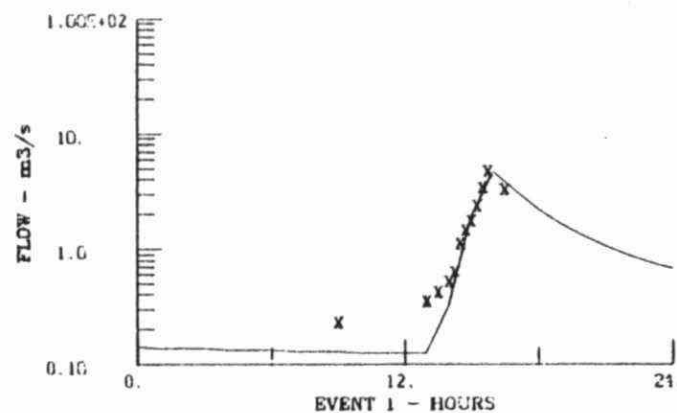
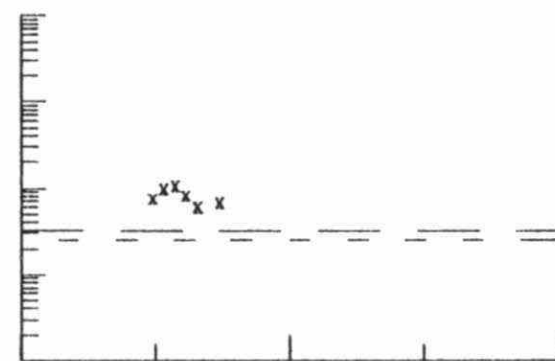
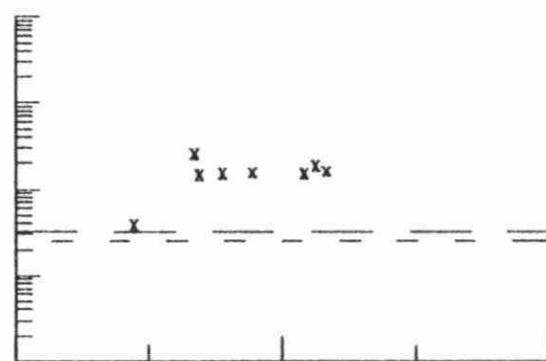
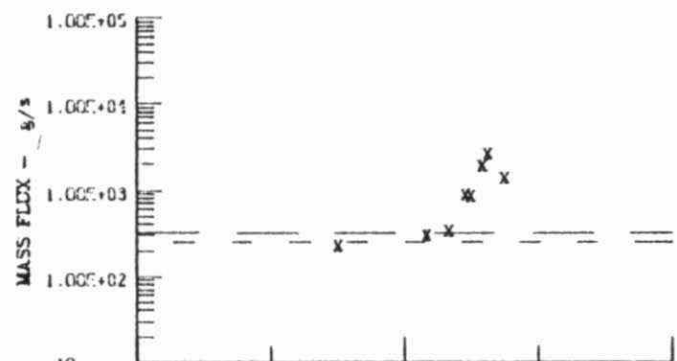
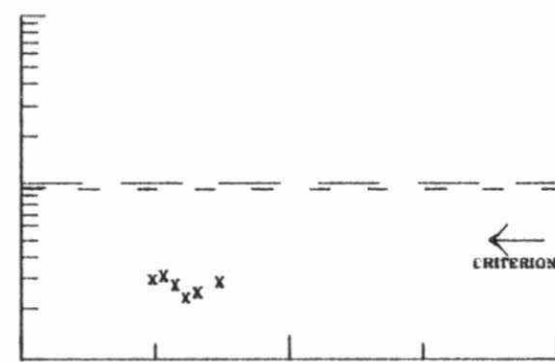
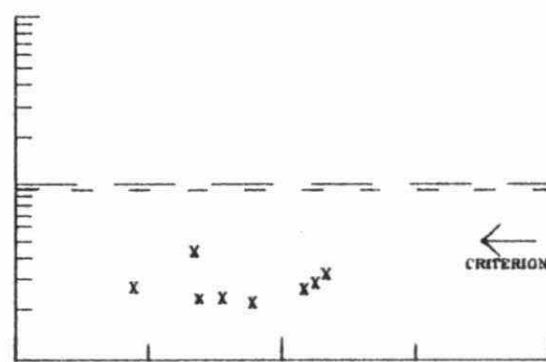
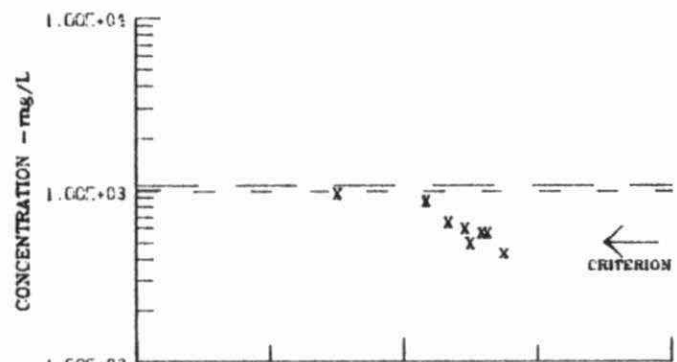
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - RESIDUE - FILTRATE



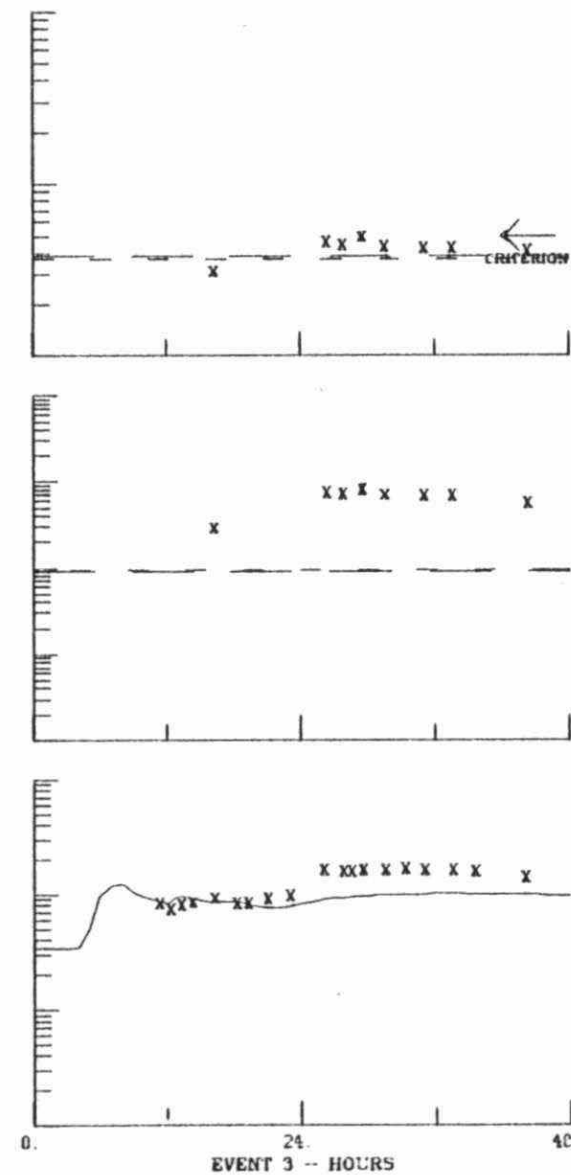
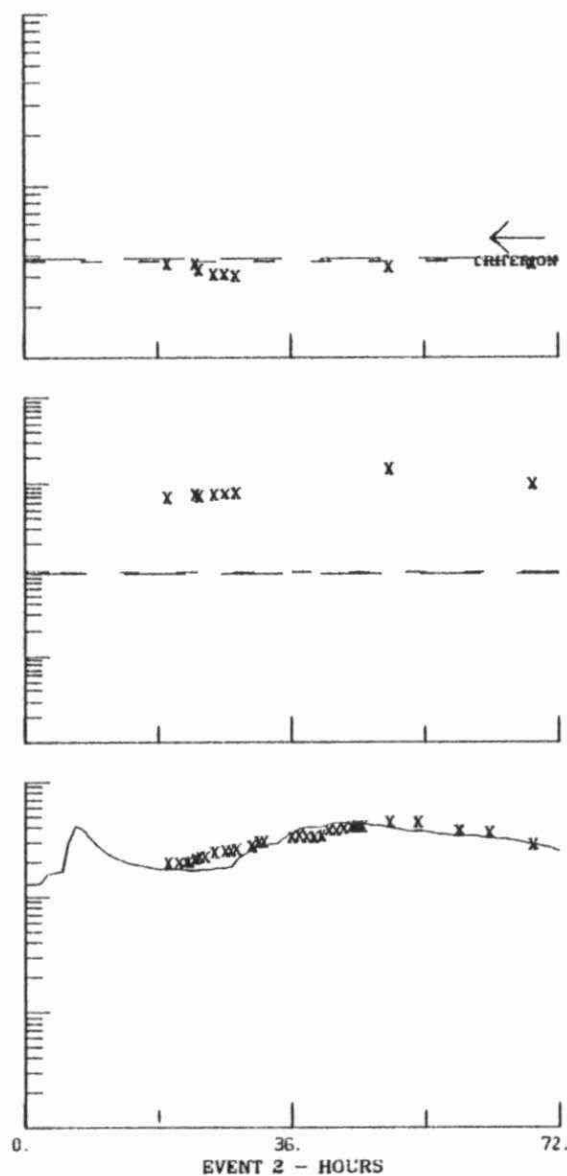
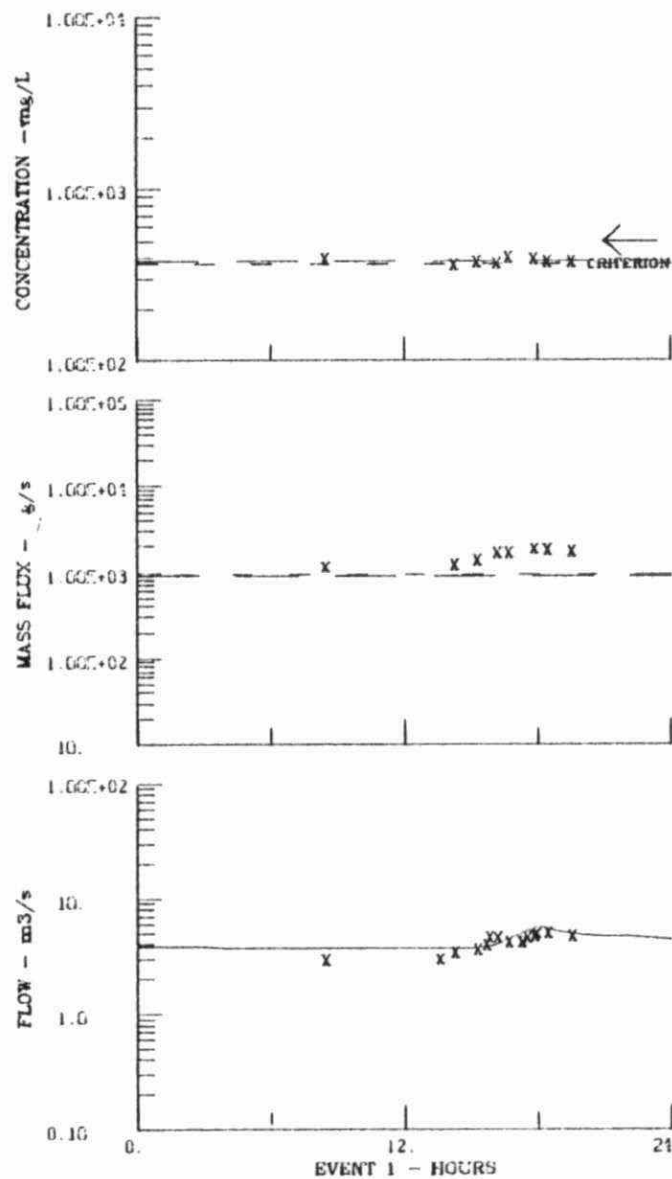
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - RESIDUE - FILTRATE



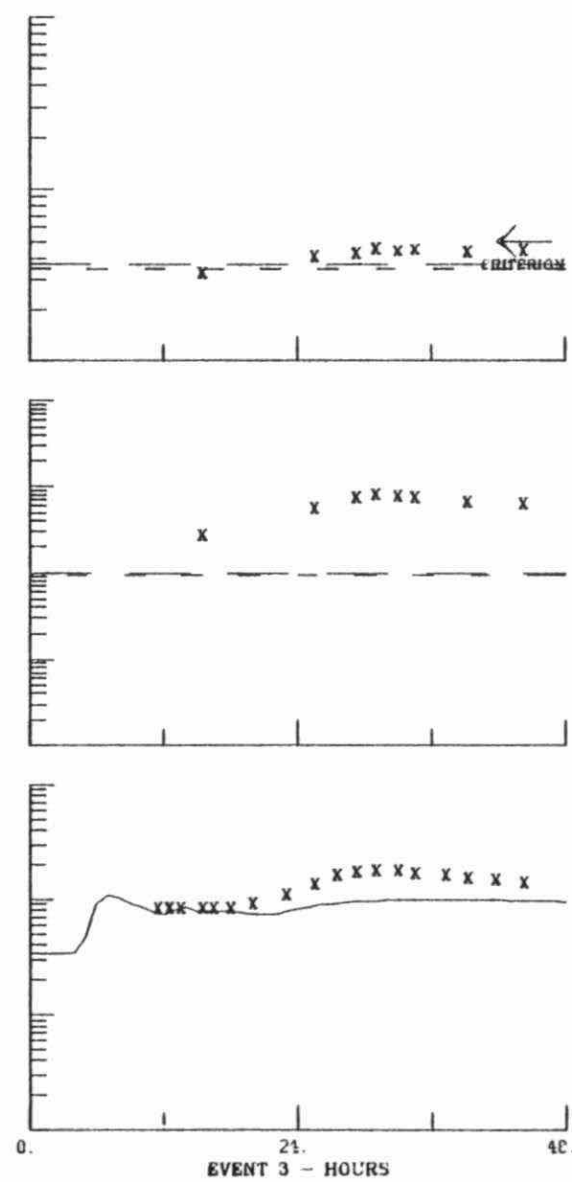
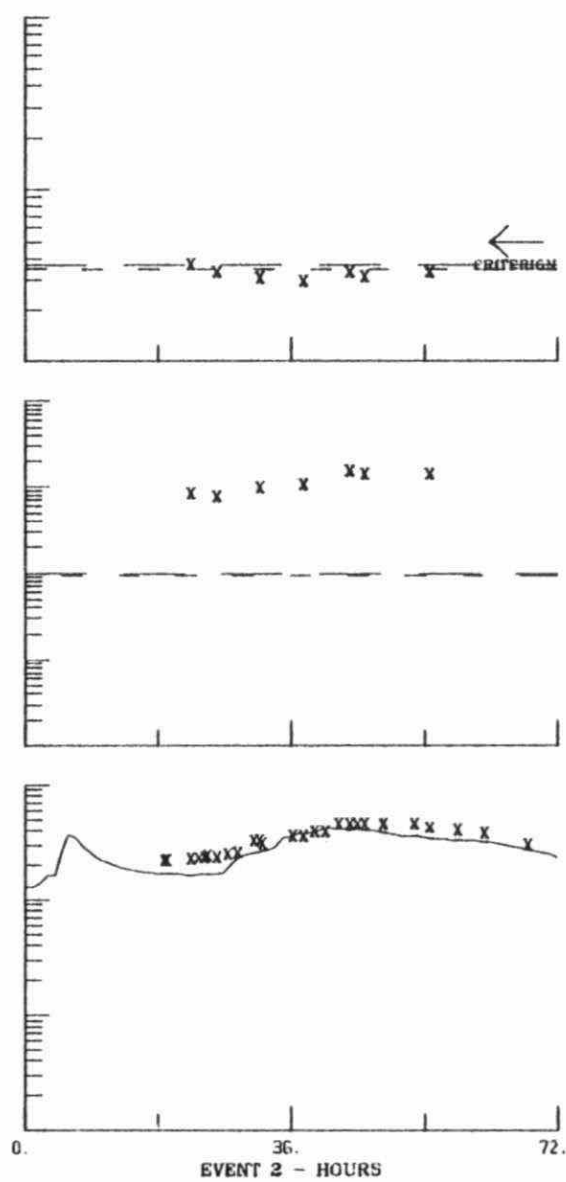
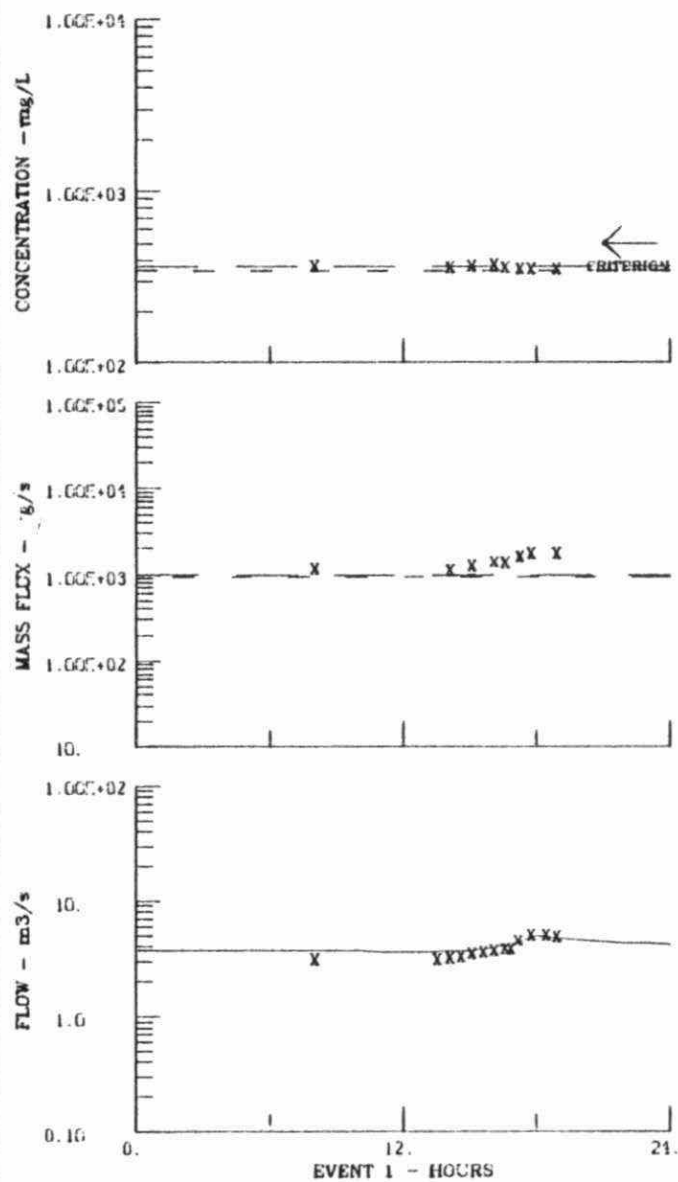
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - RESIDUE - FILTRATE



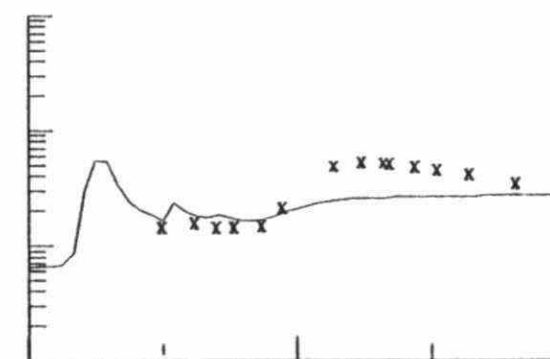
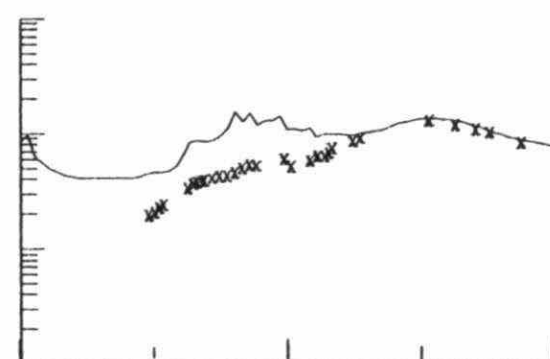
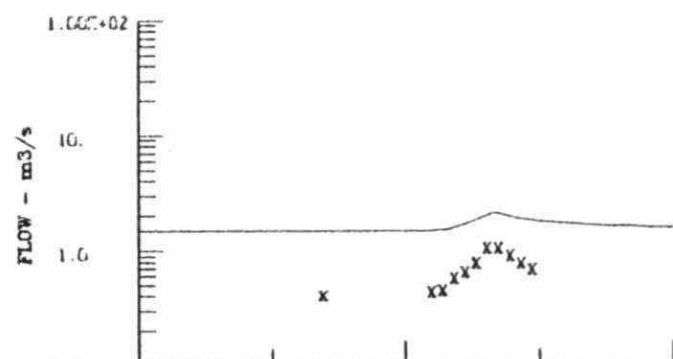
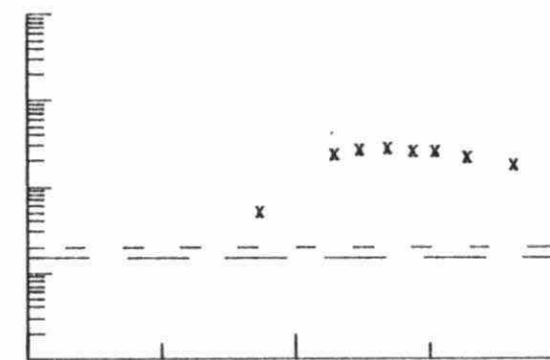
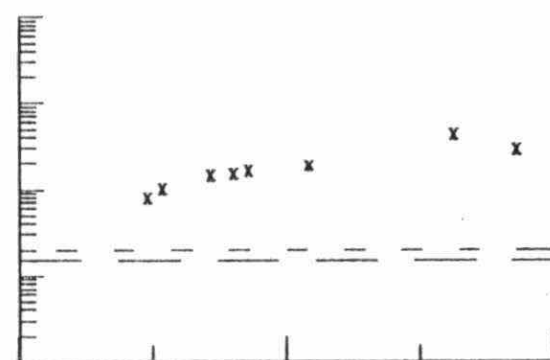
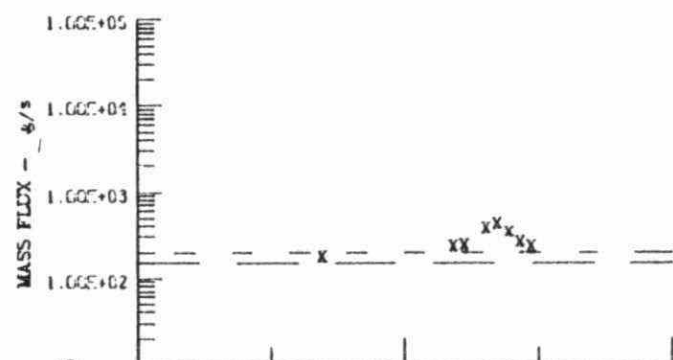
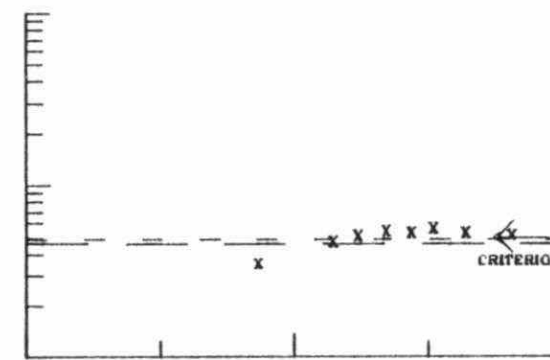
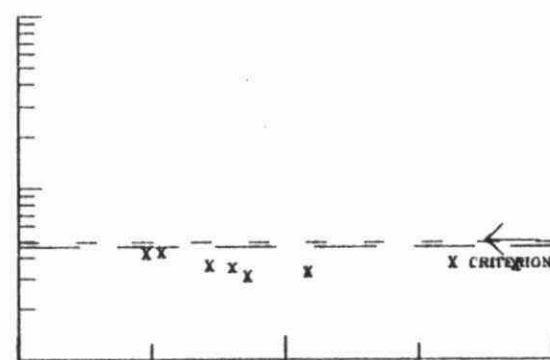
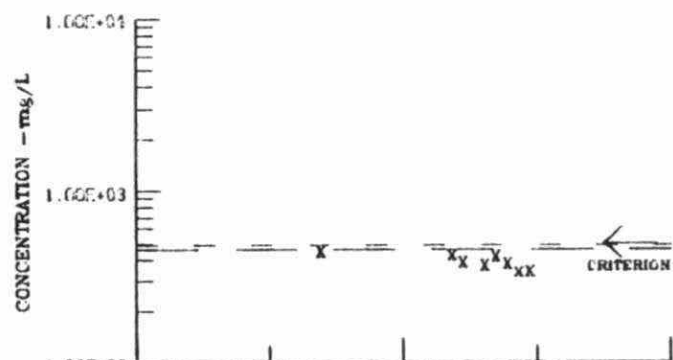
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - RESIDUE - FILTRATE



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - RESIDUE - FILTRATE



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - RESIDUE - FILTRATE

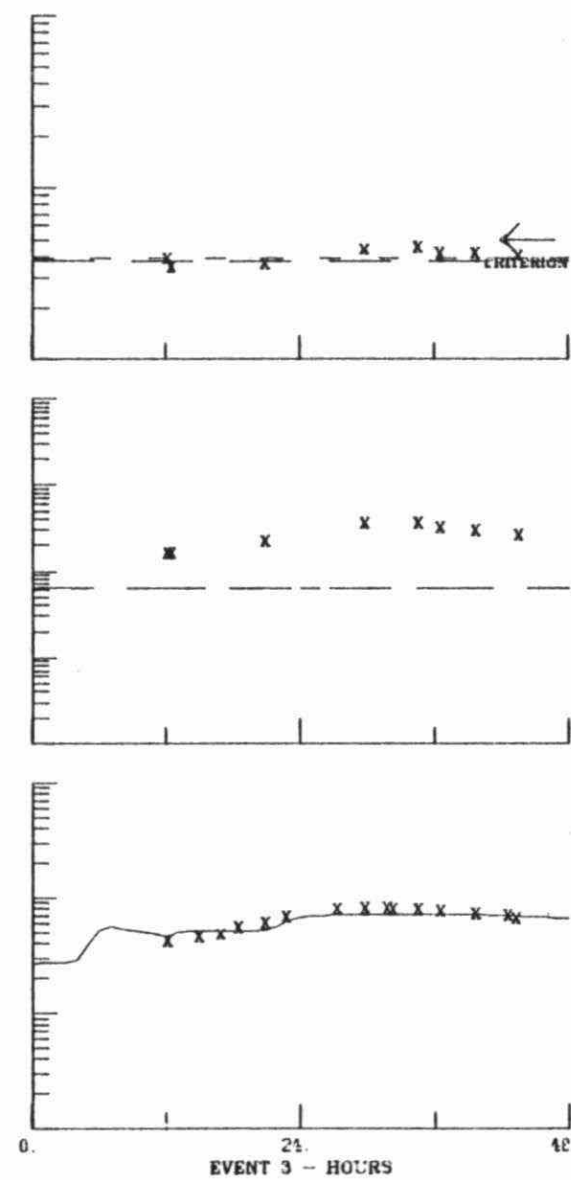
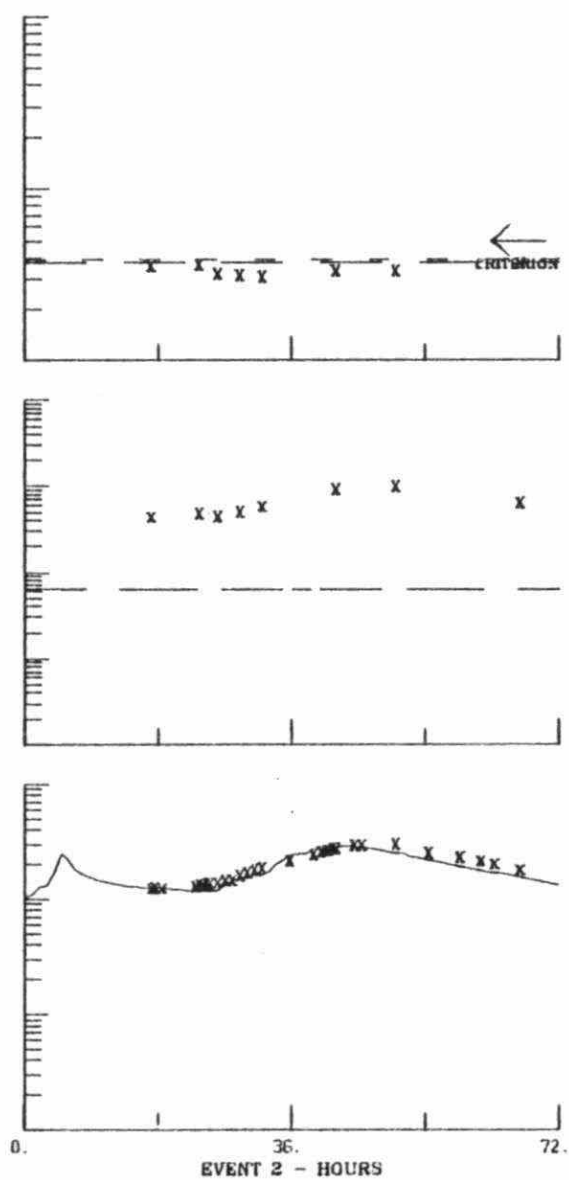
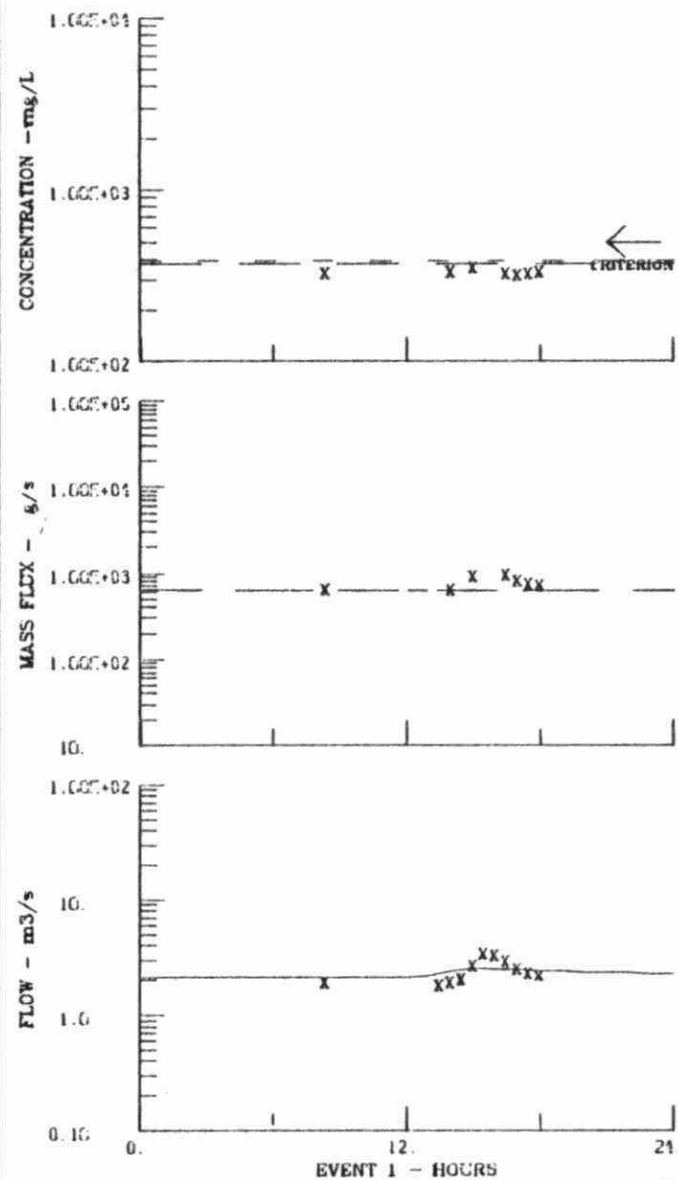


EVENT 1 - HOURS

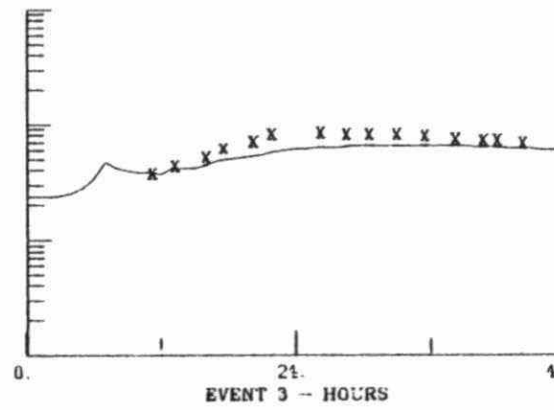
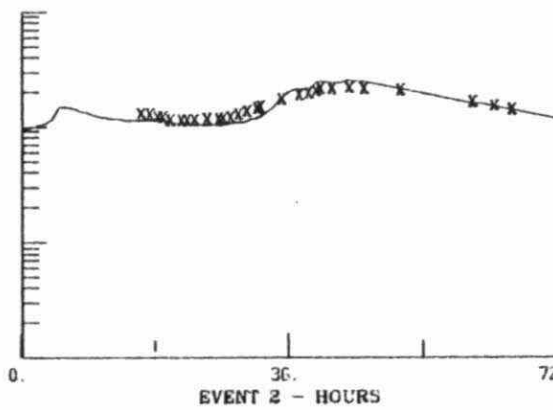
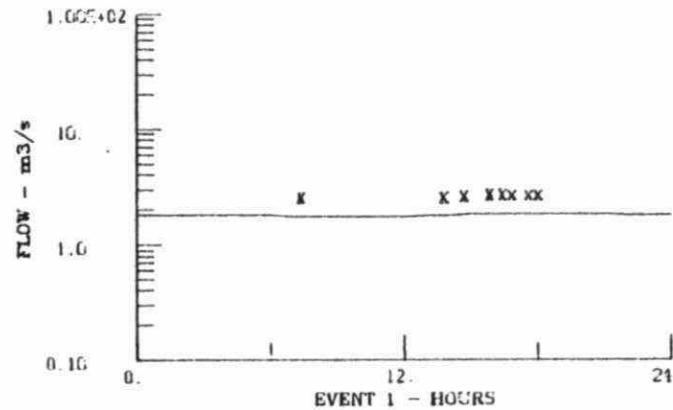
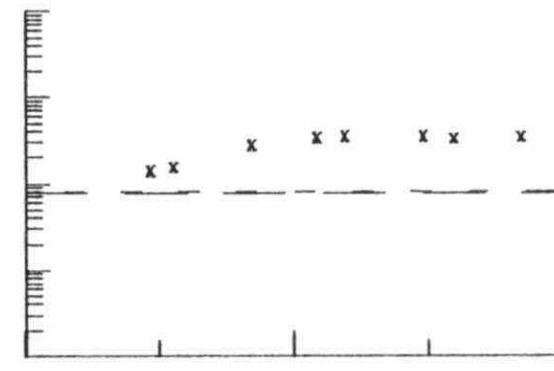
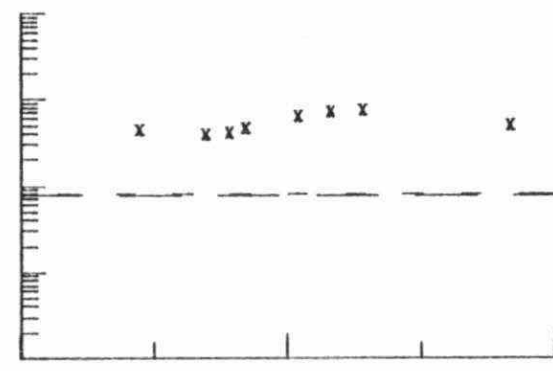
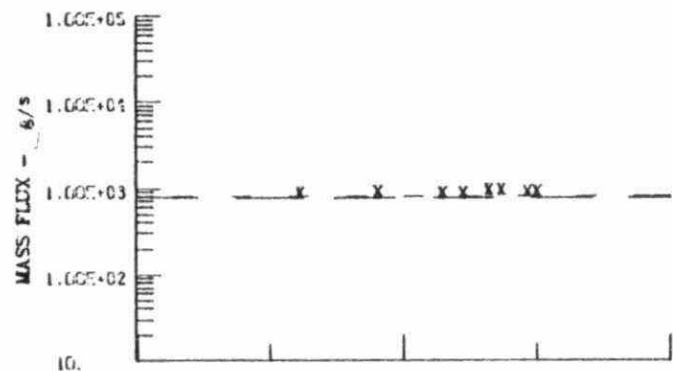
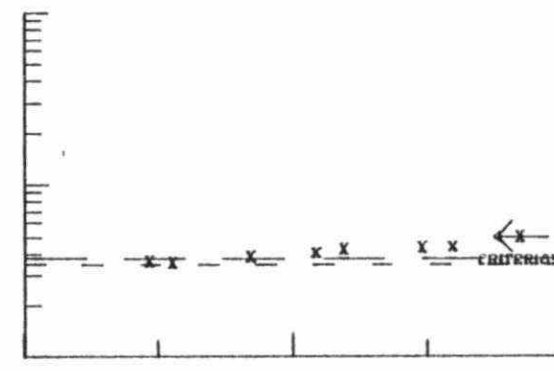
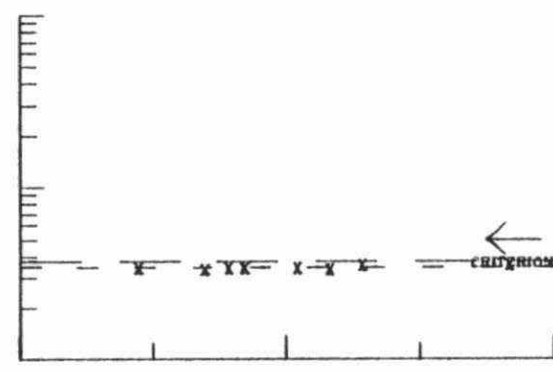
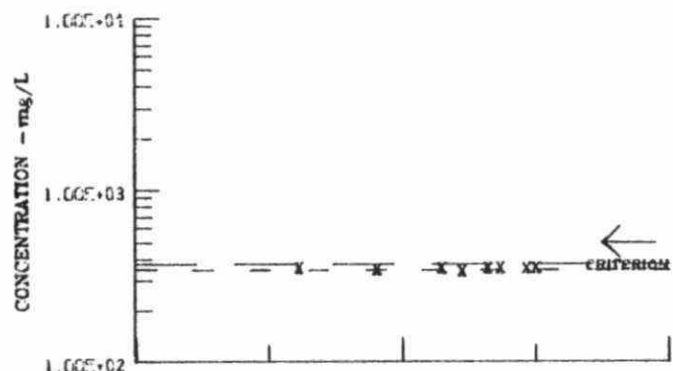
EVENT 2 - HOURS

EVENT 3 - HOURS

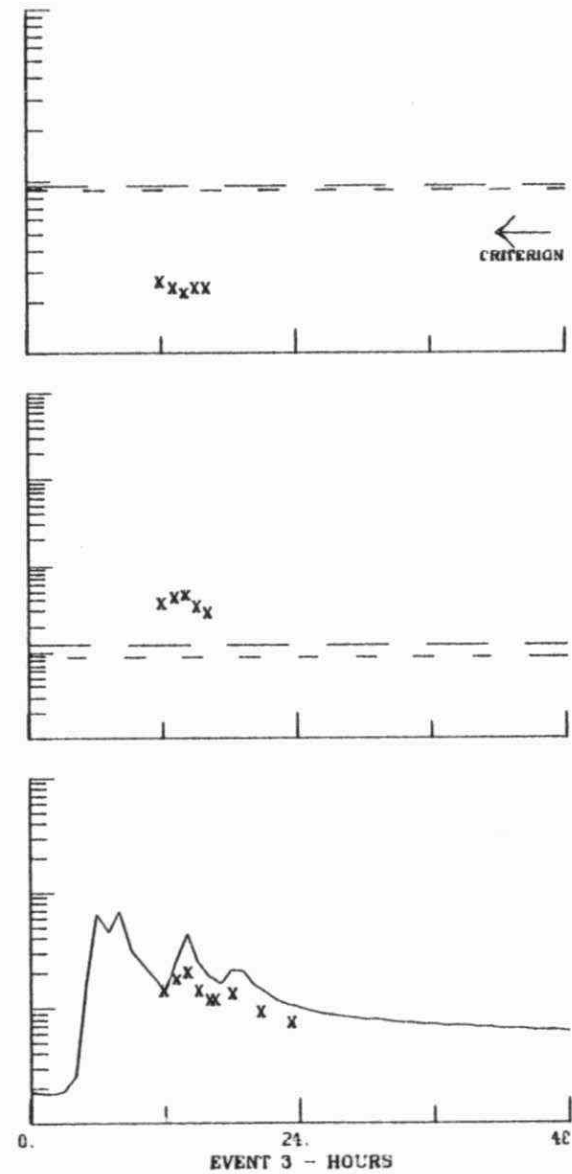
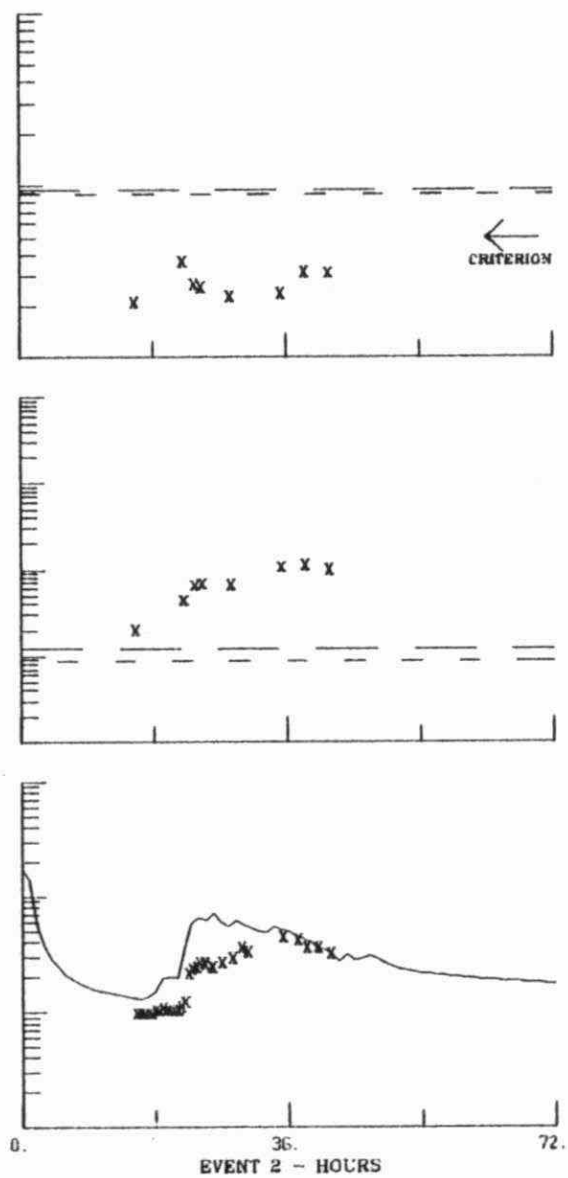
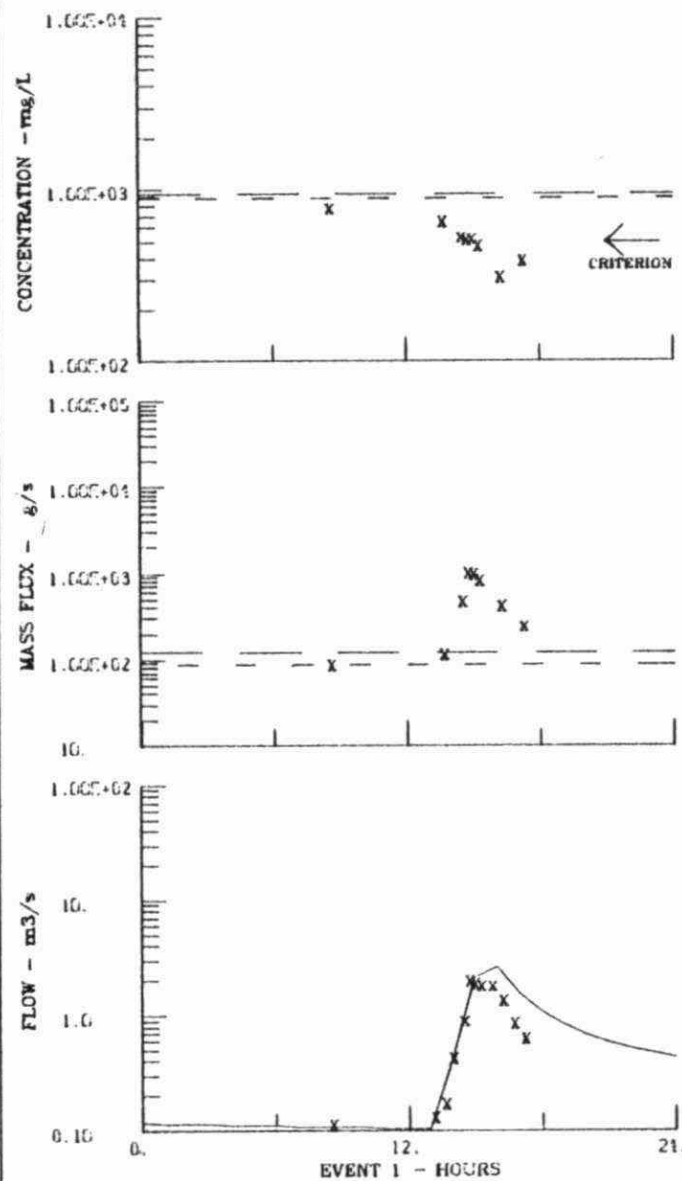
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - RESIDUE - FILTRATE



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - RESIDUE - FILTRATE

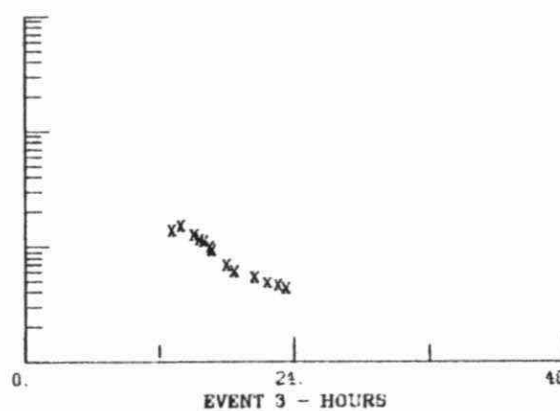
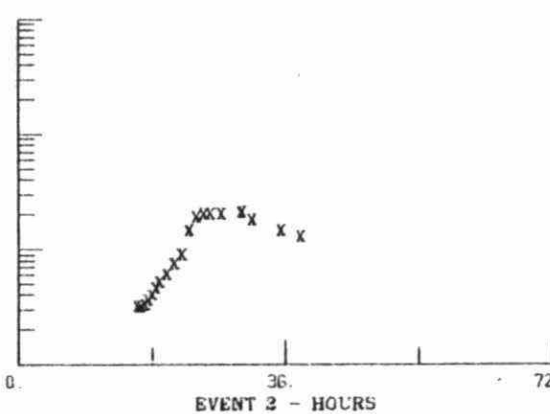
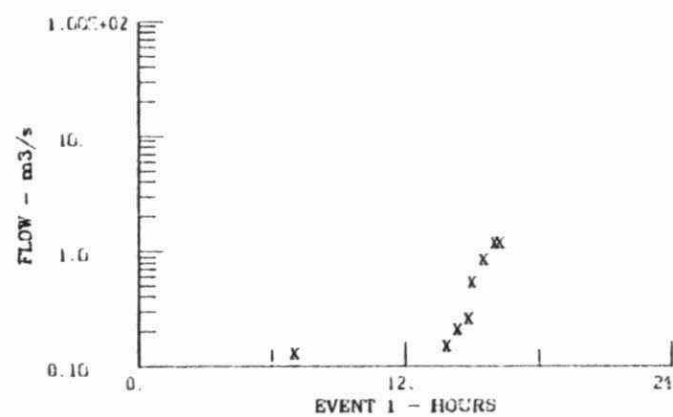
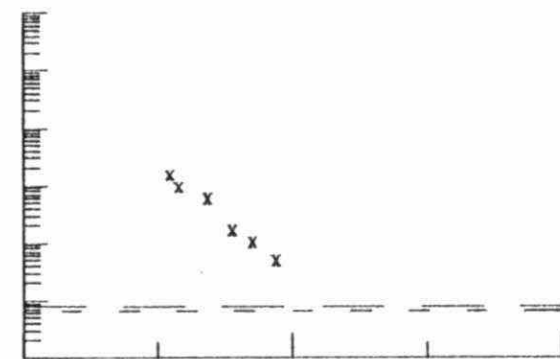
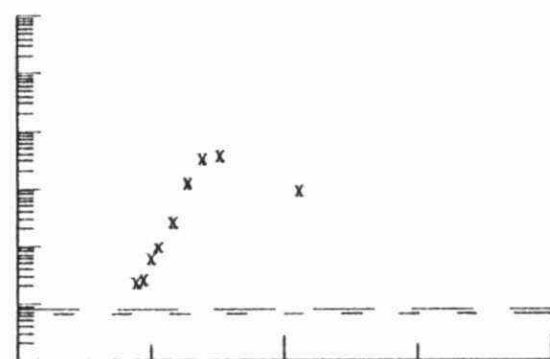
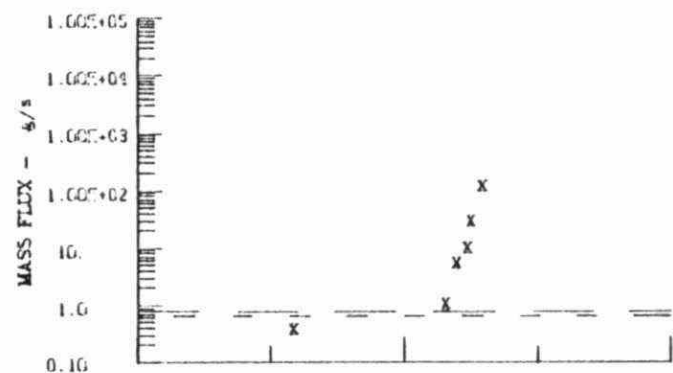
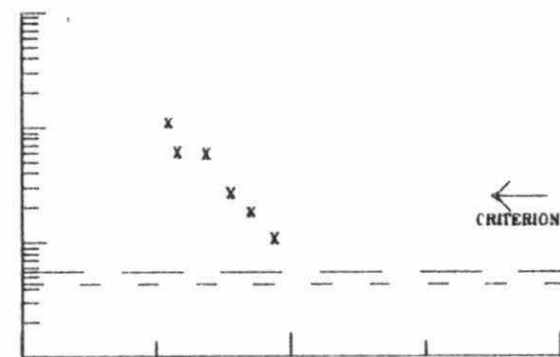
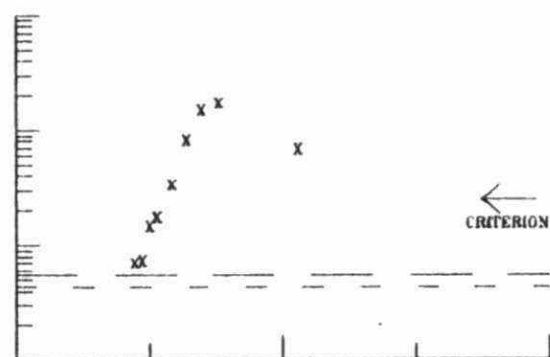
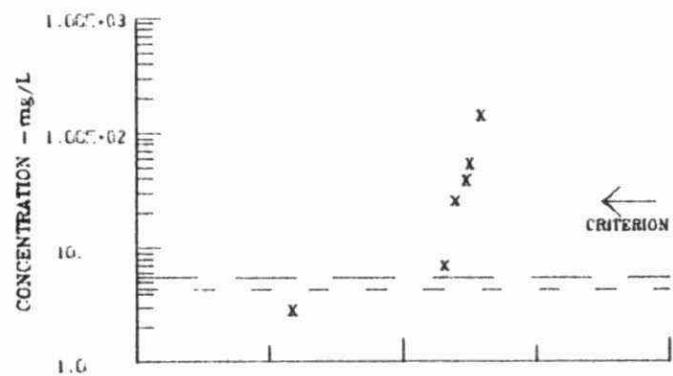


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - RESIDUE - FILTRATE

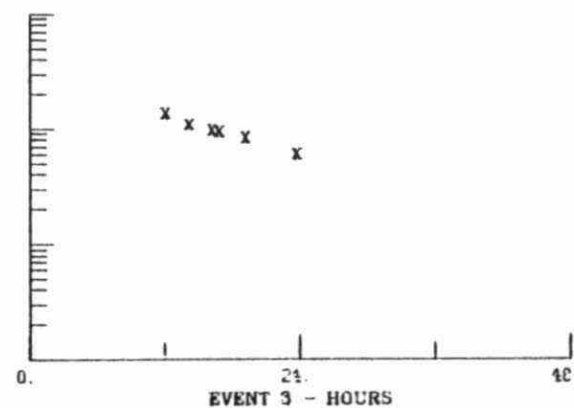
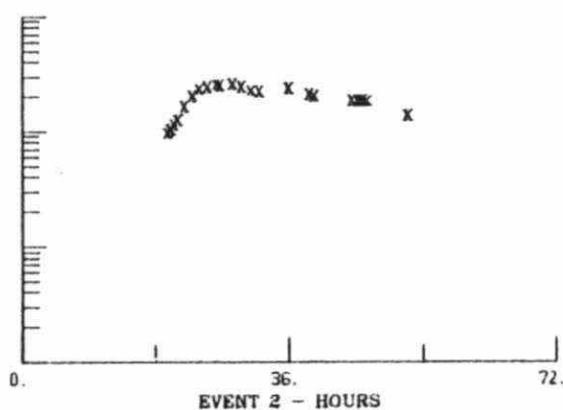
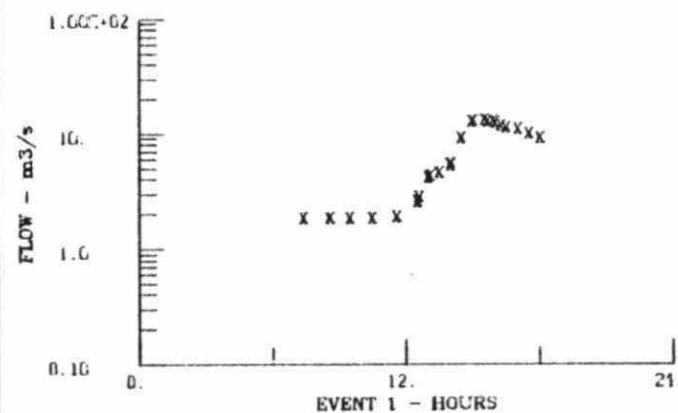
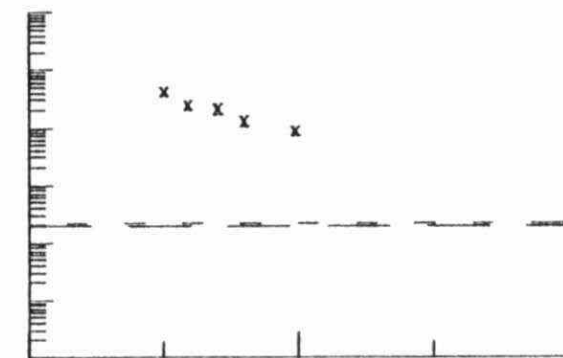
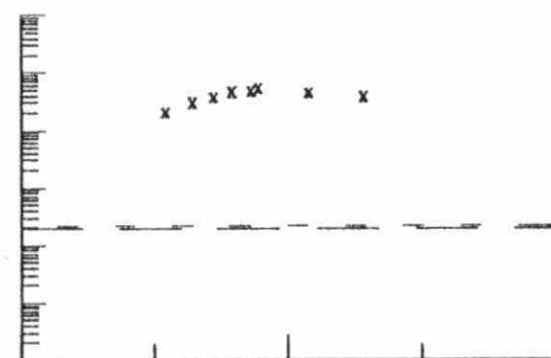
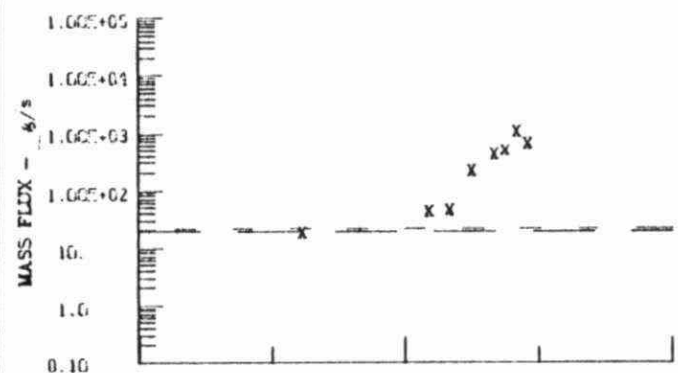
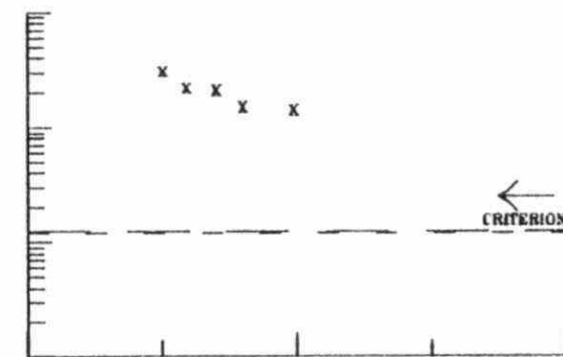
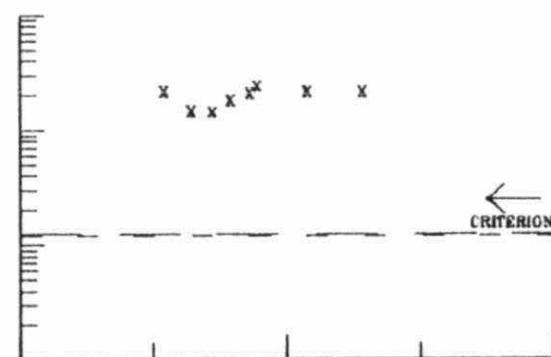
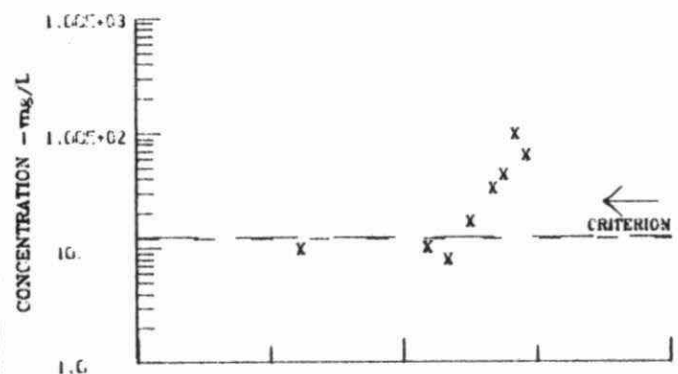


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - RESIDUE - FILTRATE

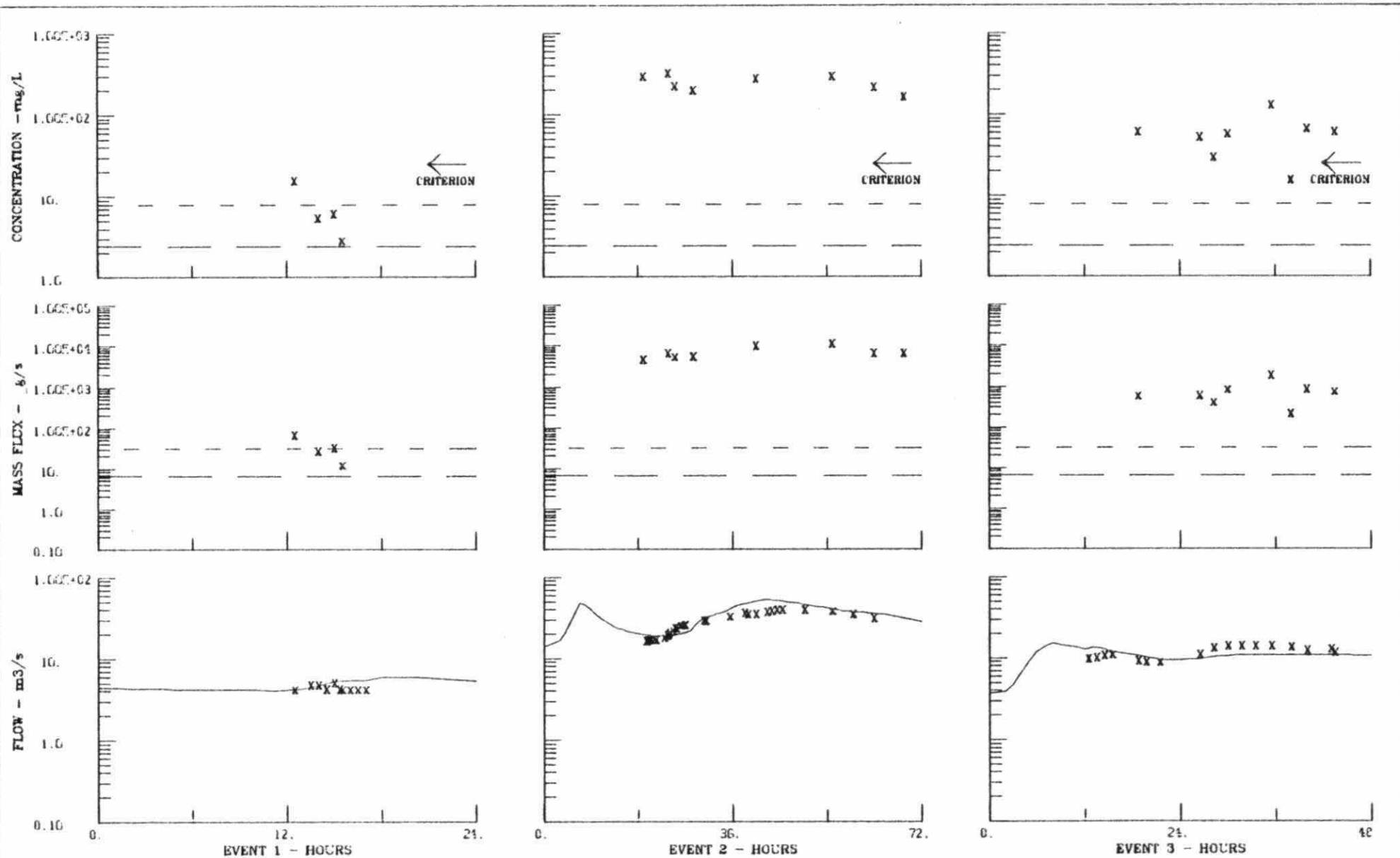
RESIDUE, PARTICULATE



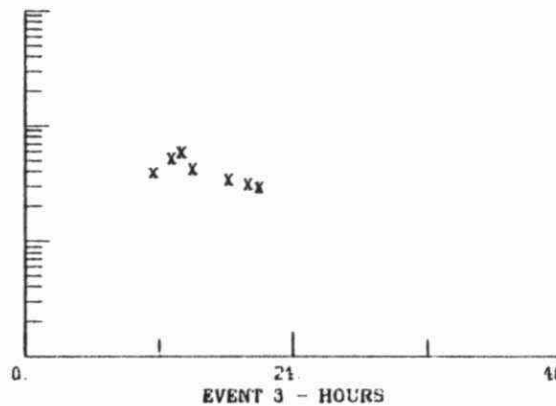
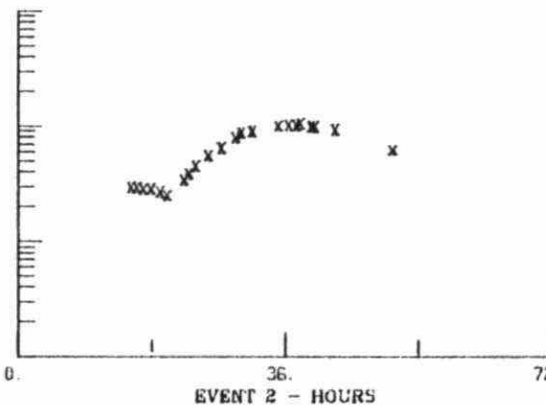
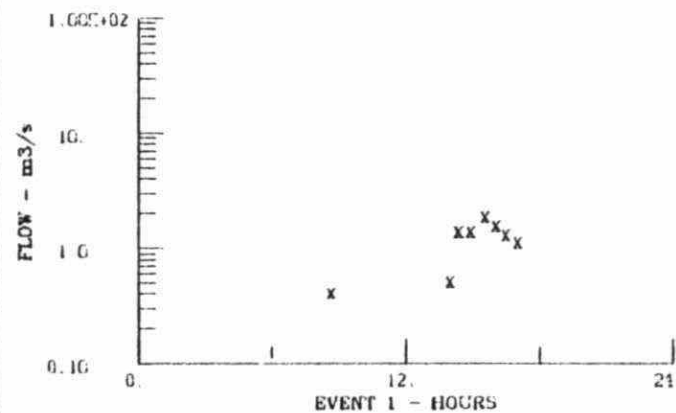
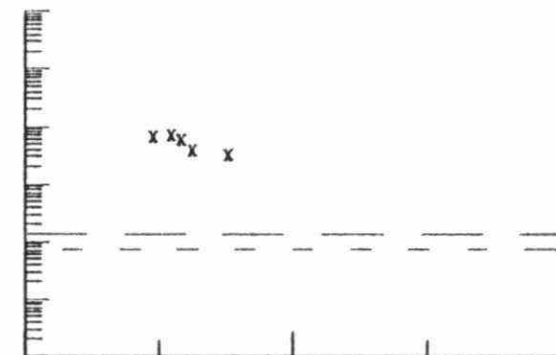
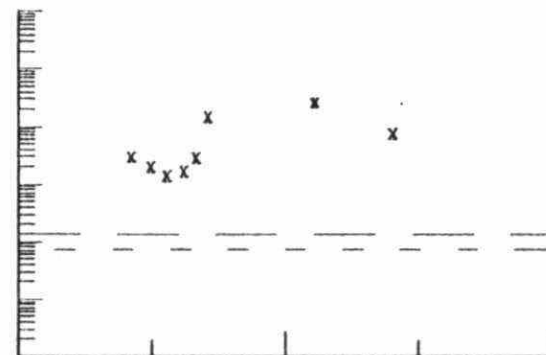
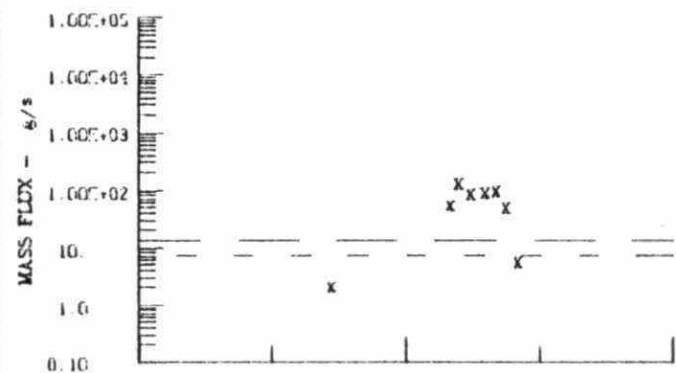
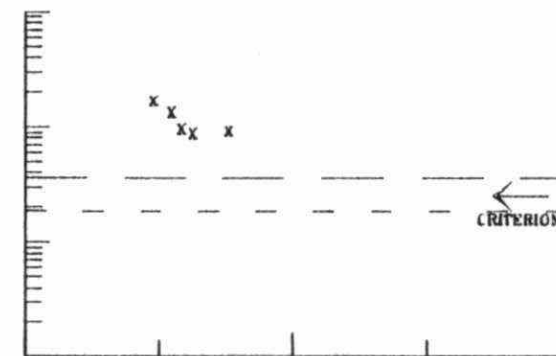
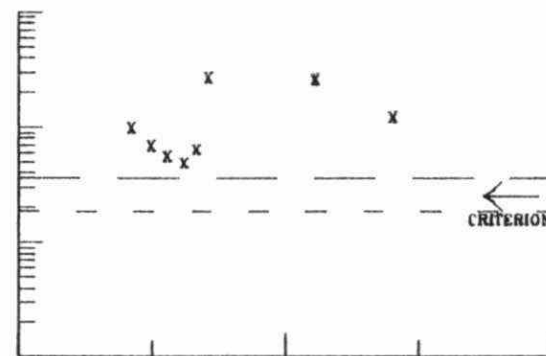
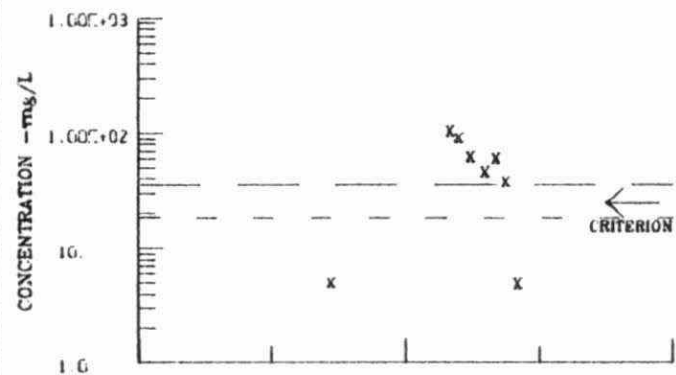
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - RESIDUE - PARTICULATE

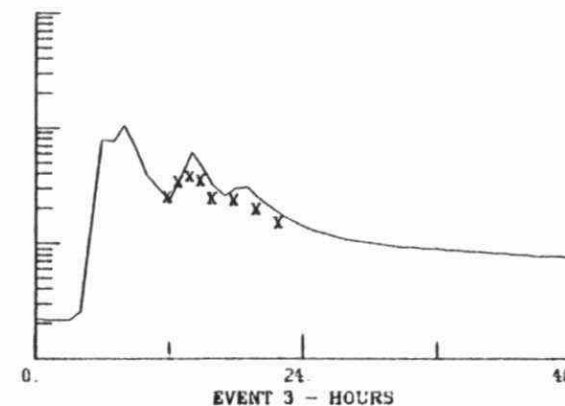
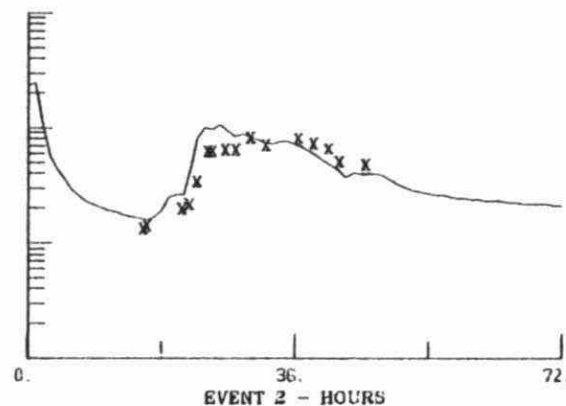
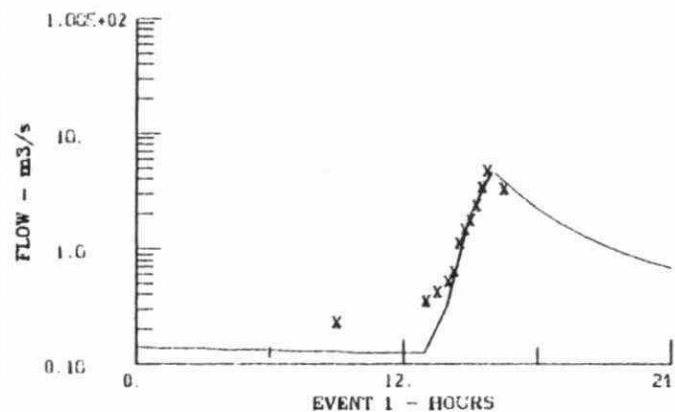
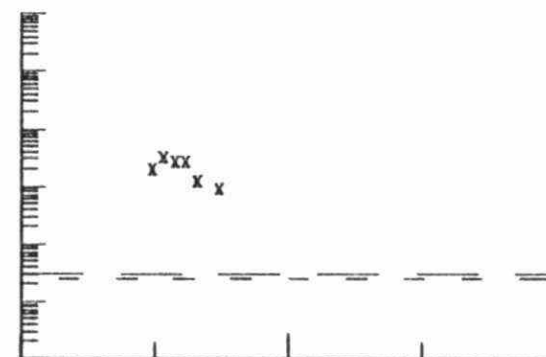
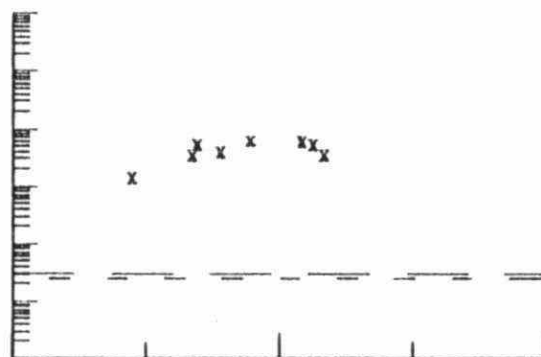
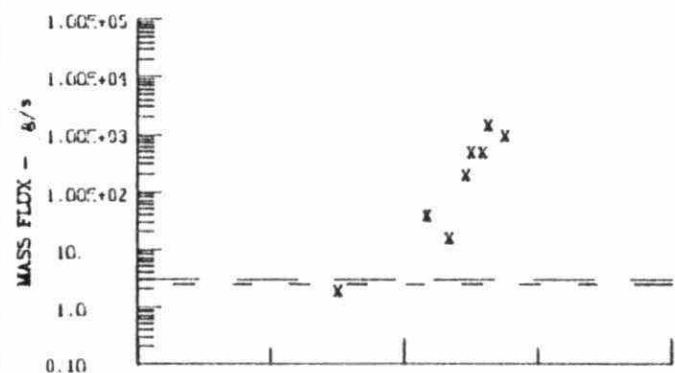
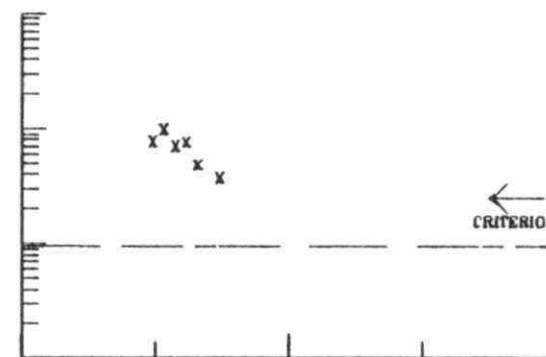
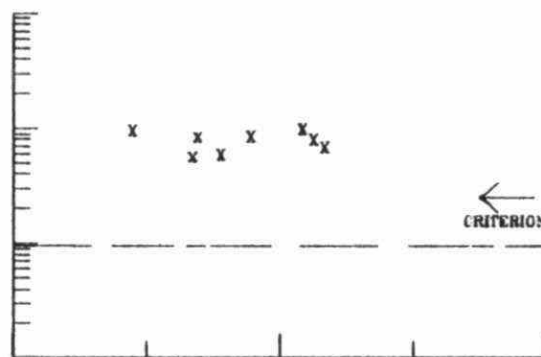
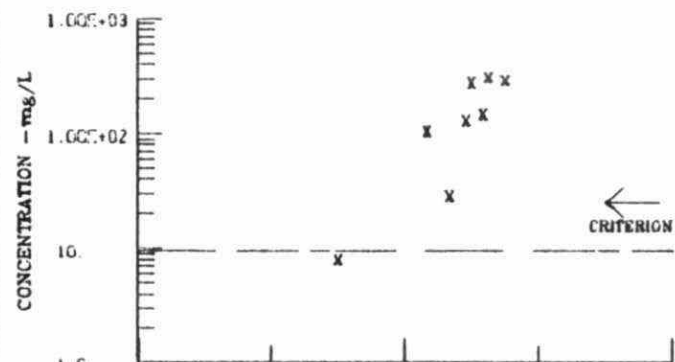


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - RESIDUE - PARTICULATE

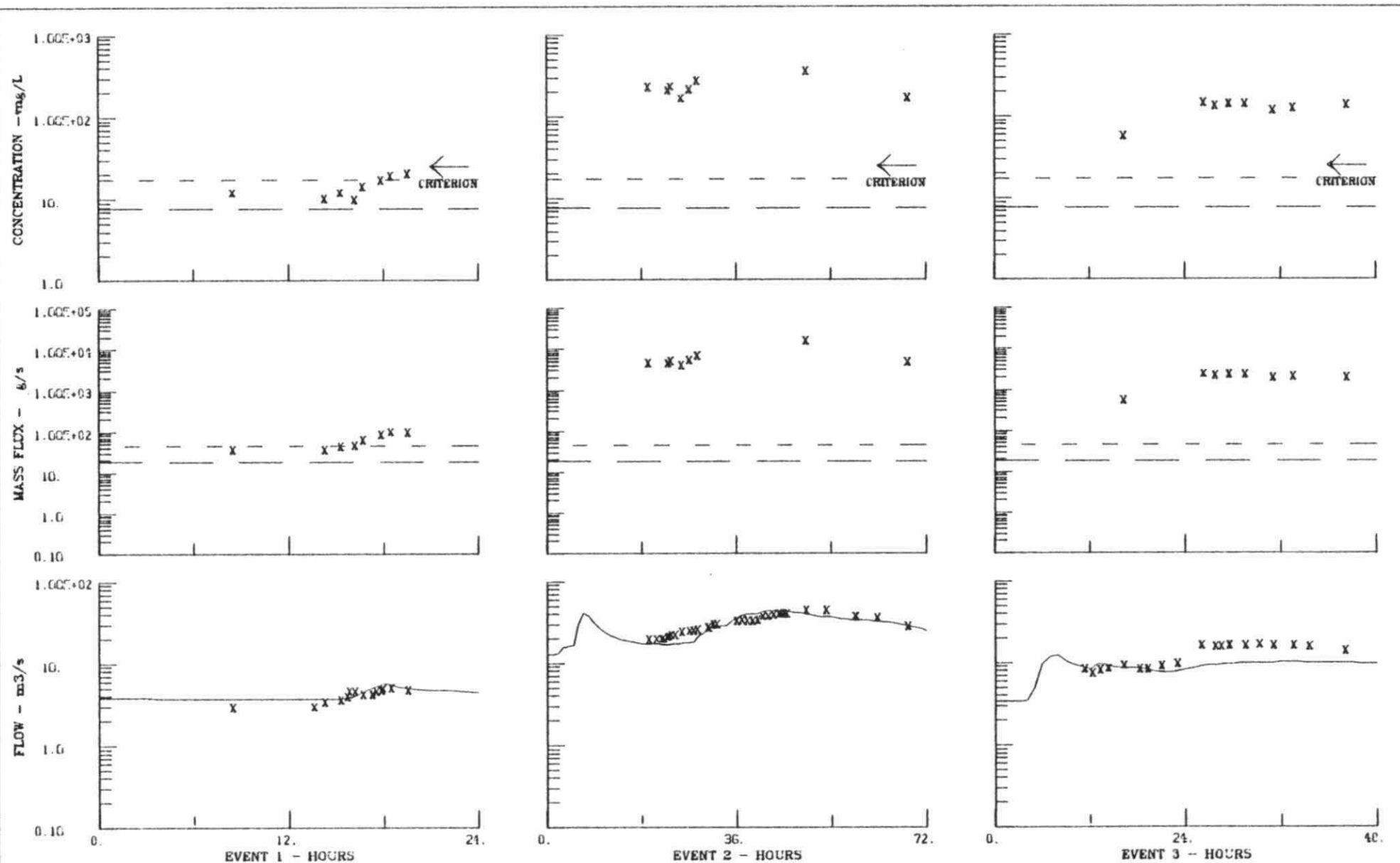


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - RESIDUE - PARTICULATE

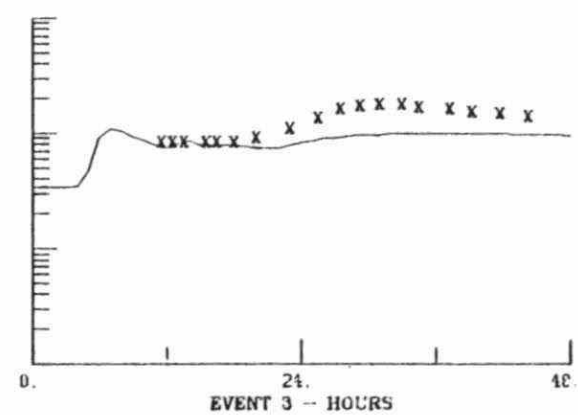
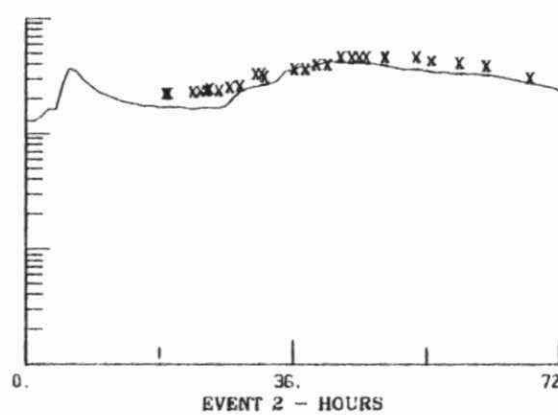
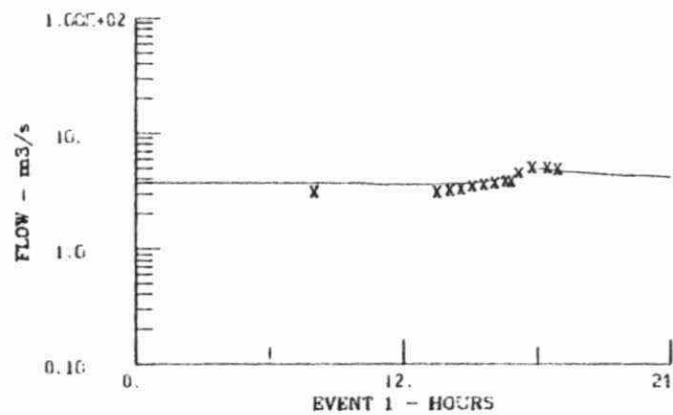
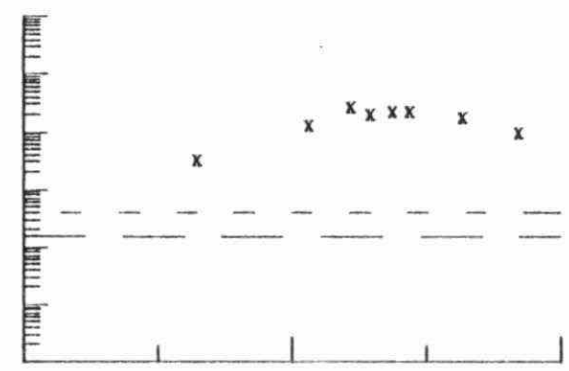
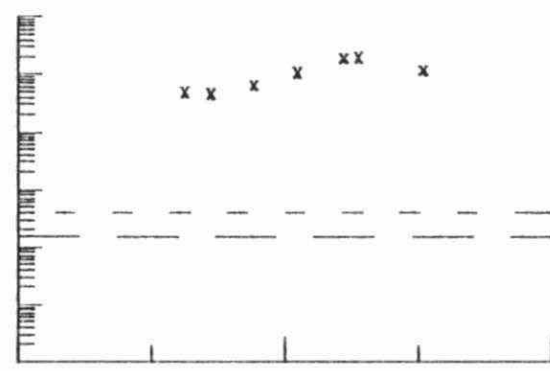
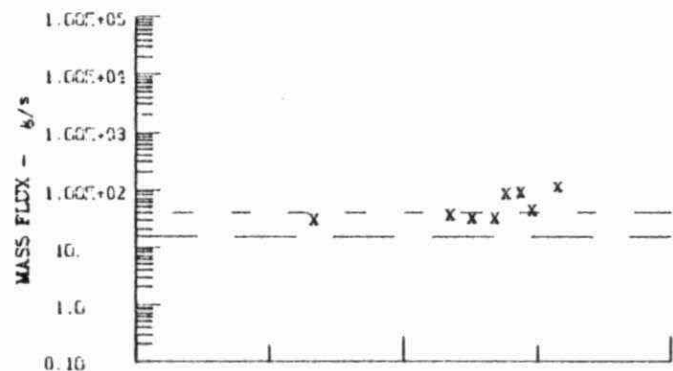
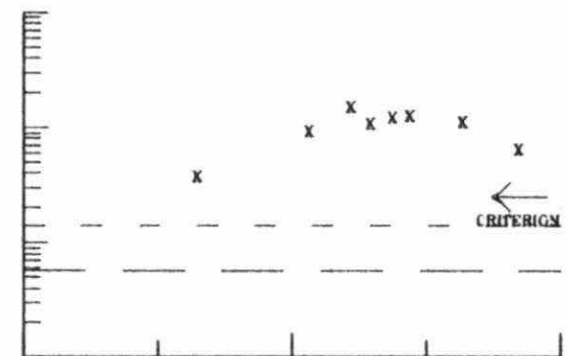
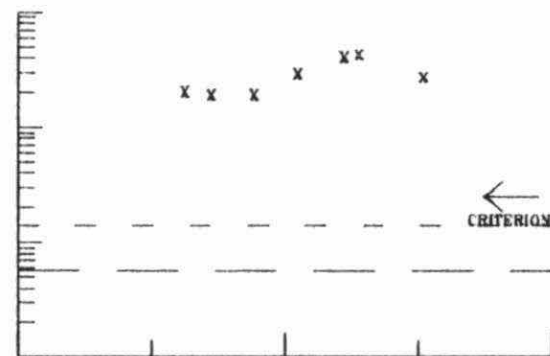
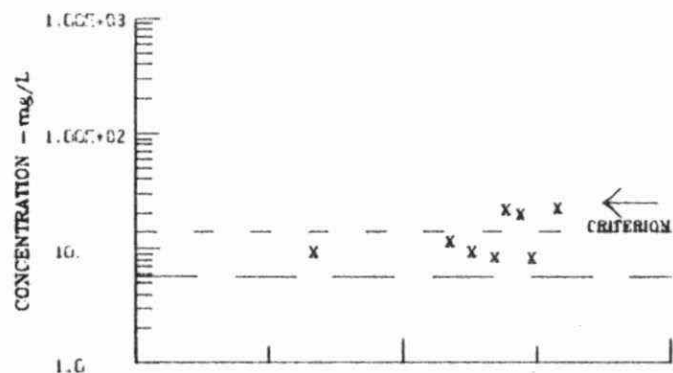




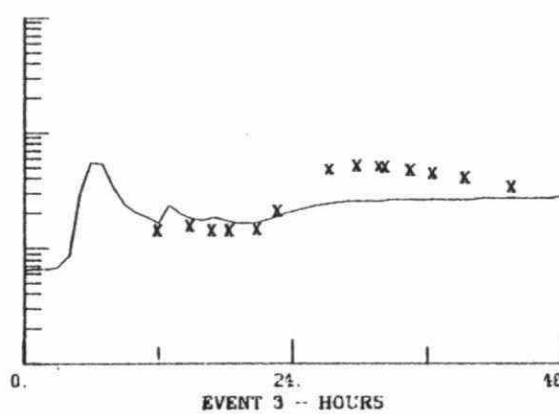
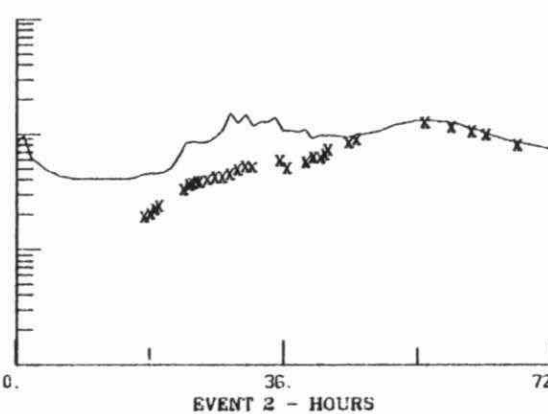
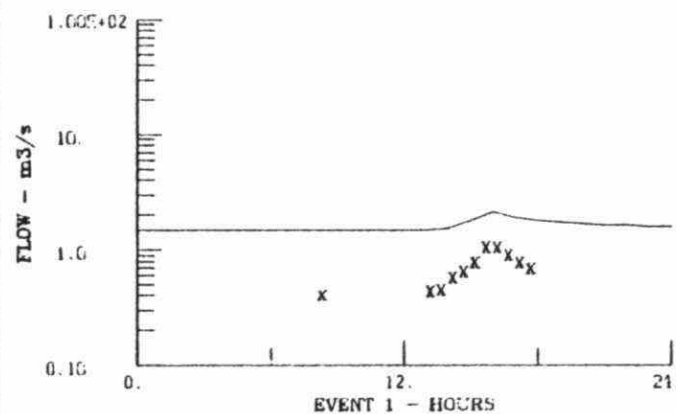
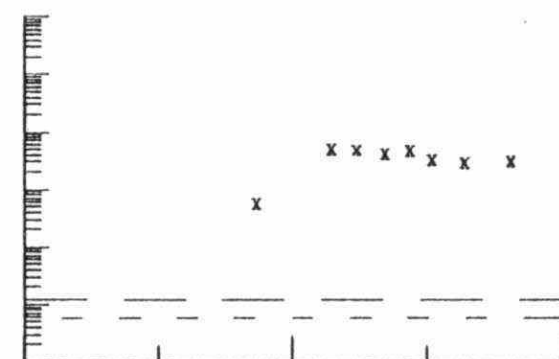
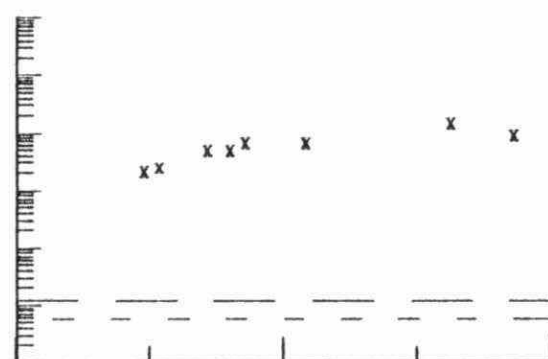
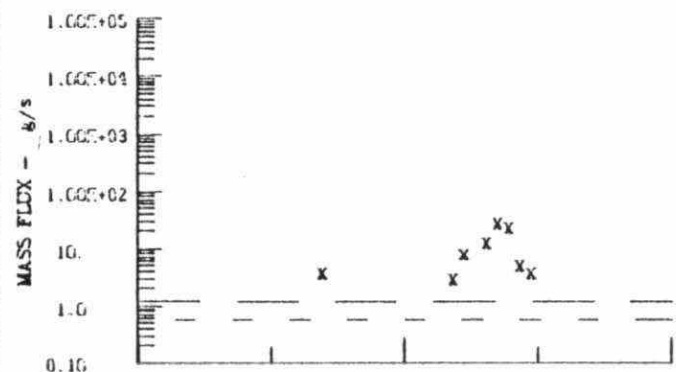
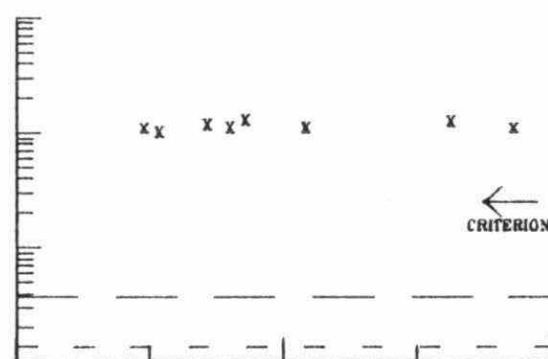
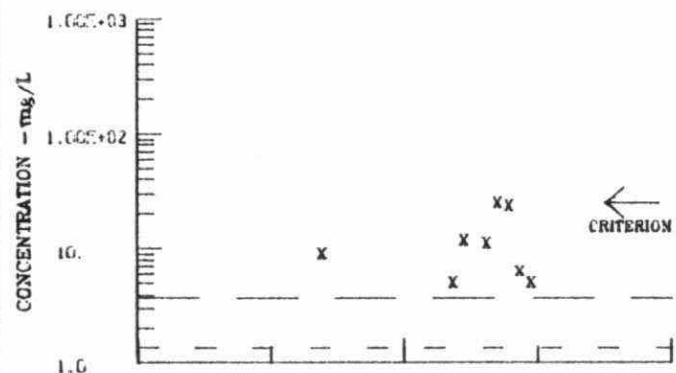
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - RESIDUE - PARTICULATE

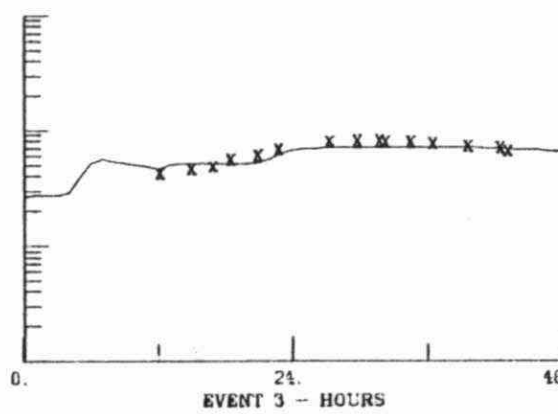
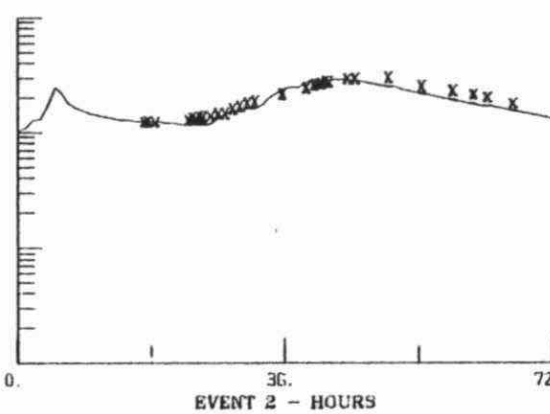
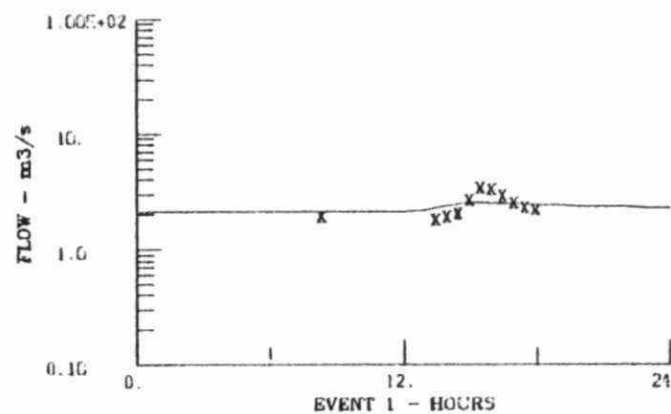
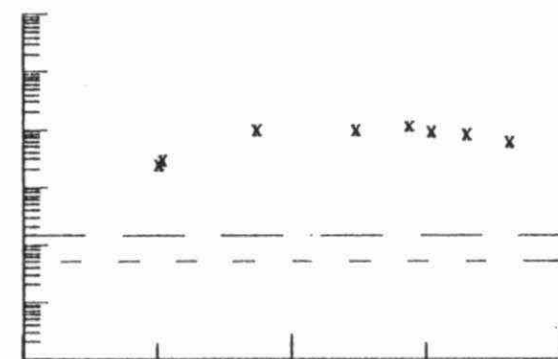
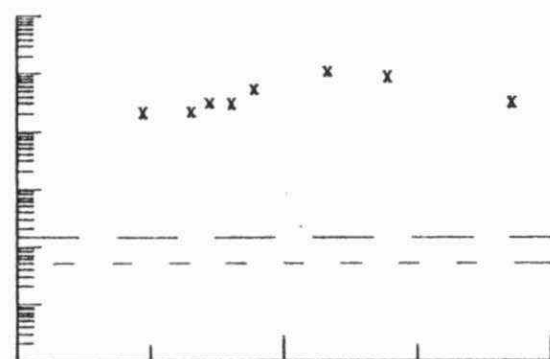
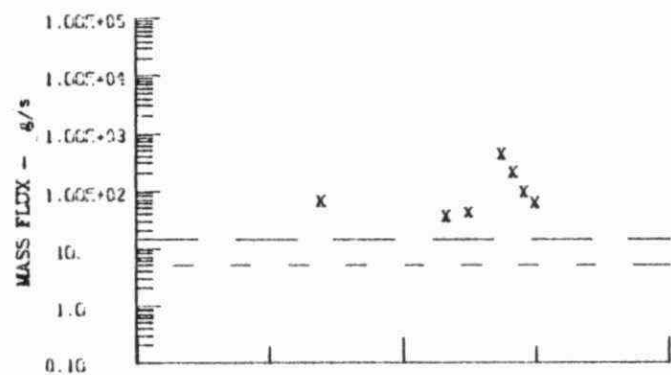
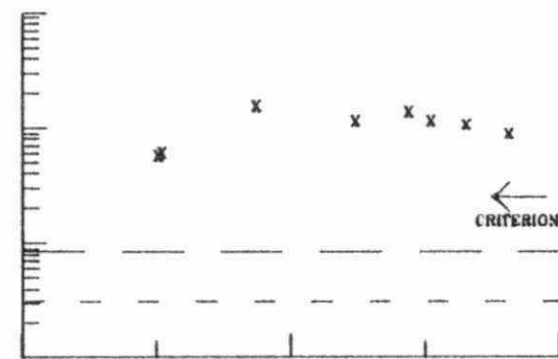
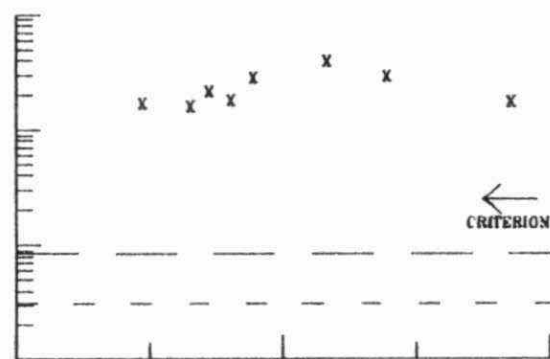
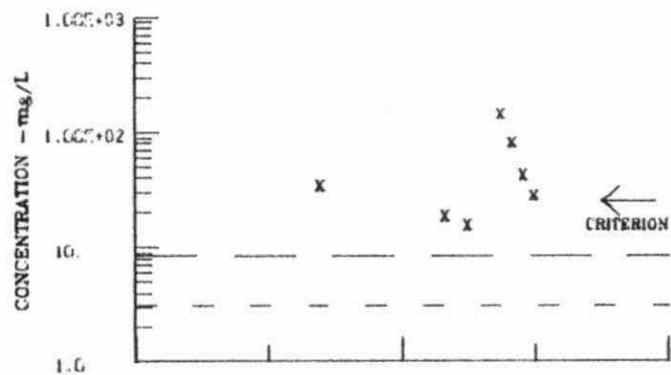


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - RESIDUE - PARTICULATE

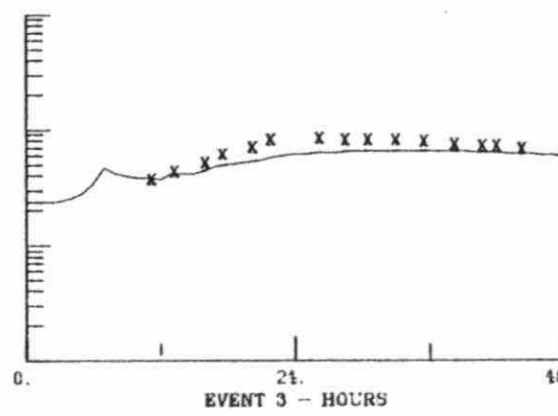
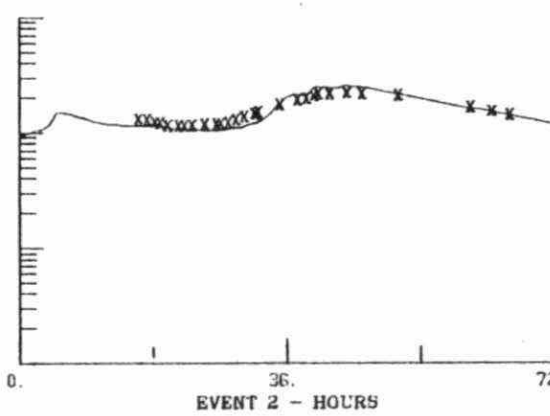
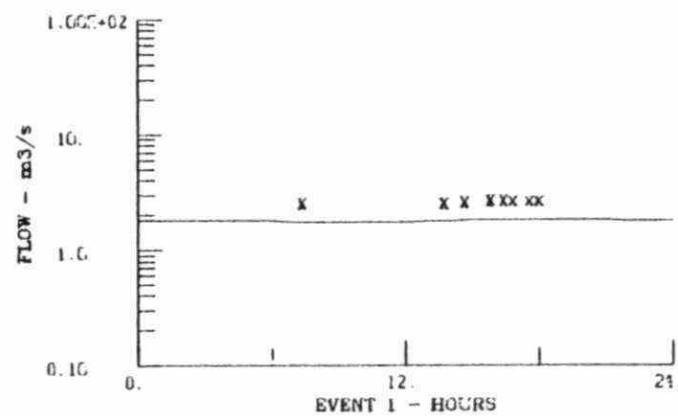
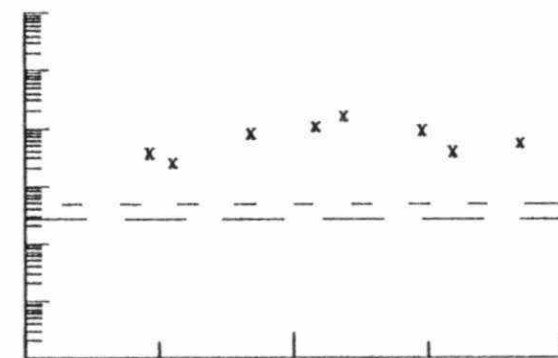
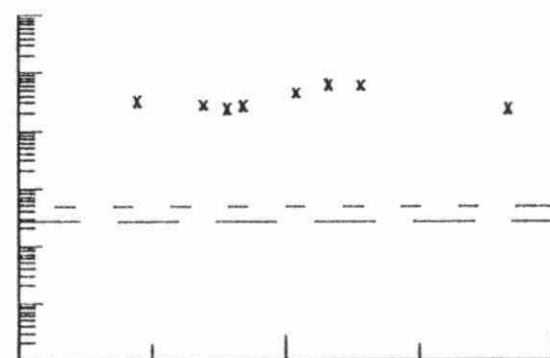
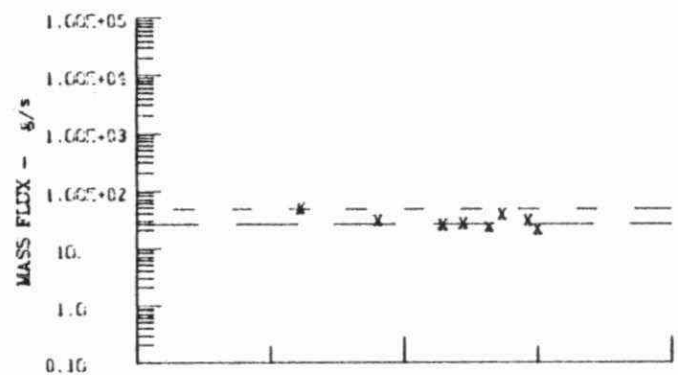
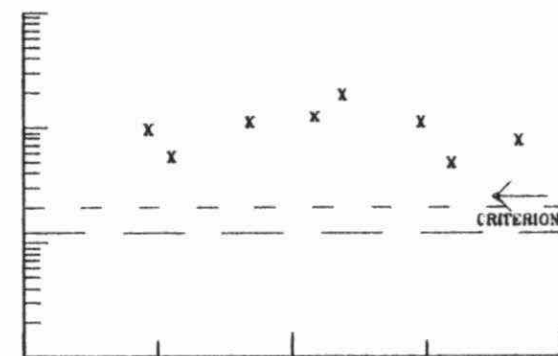
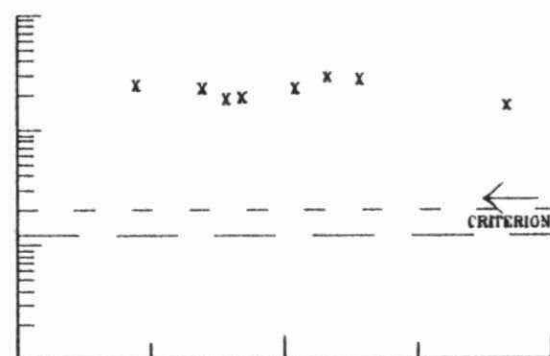
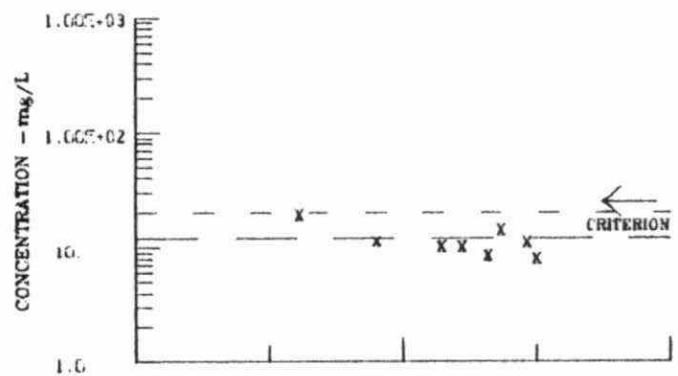


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - RESIDUE - PARTICULATE

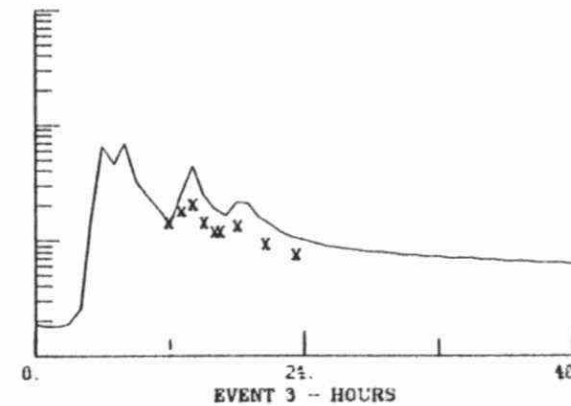
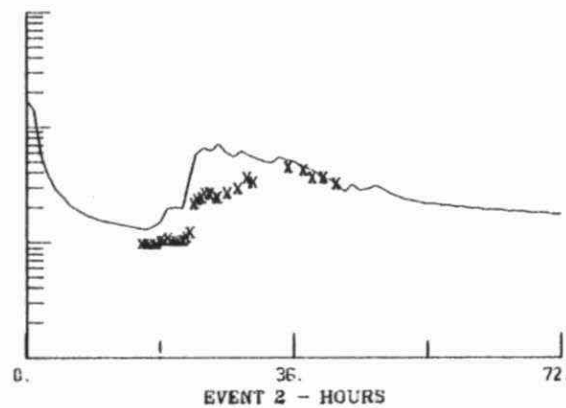
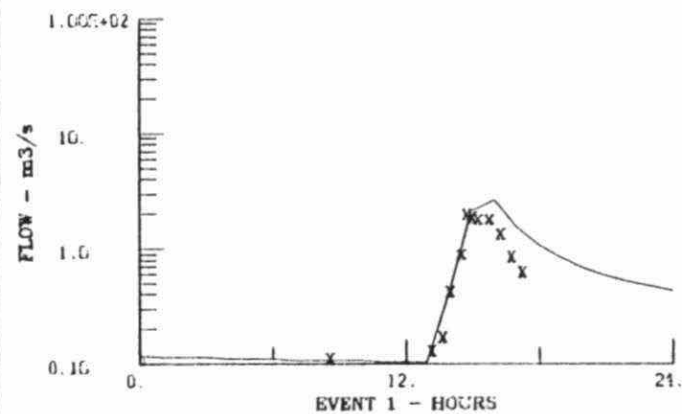
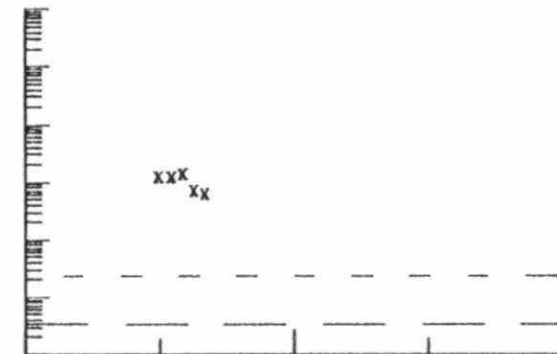
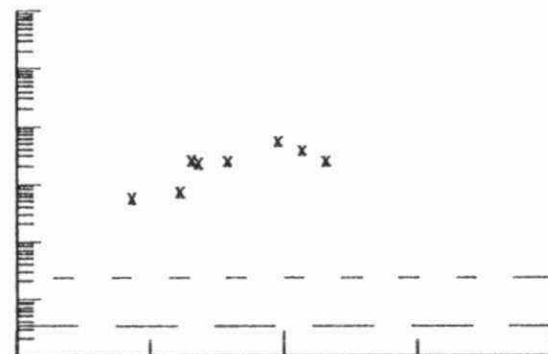
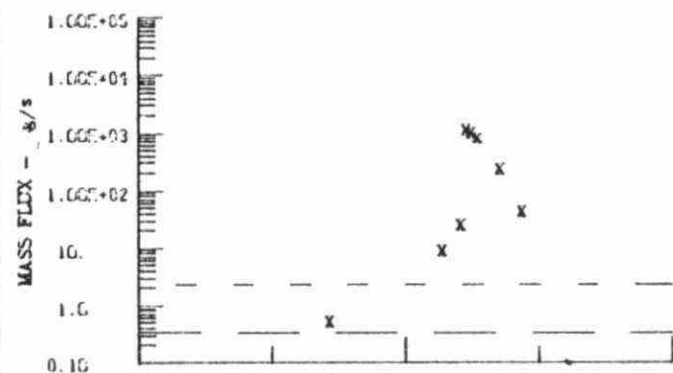
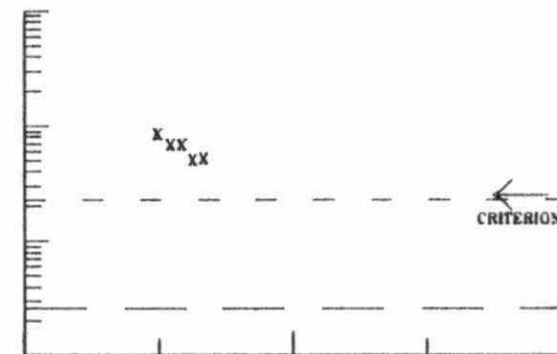
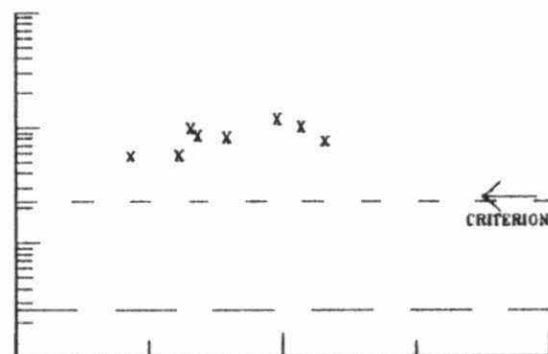
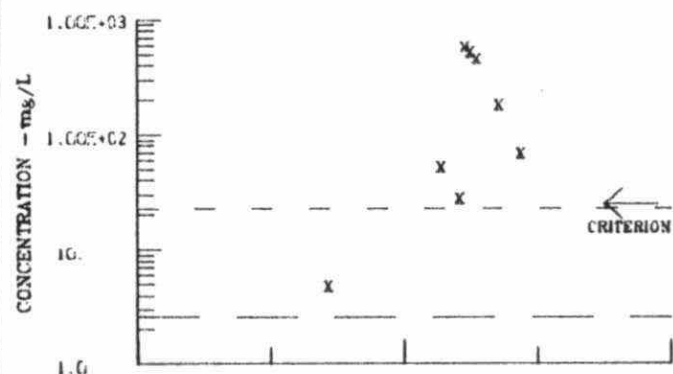




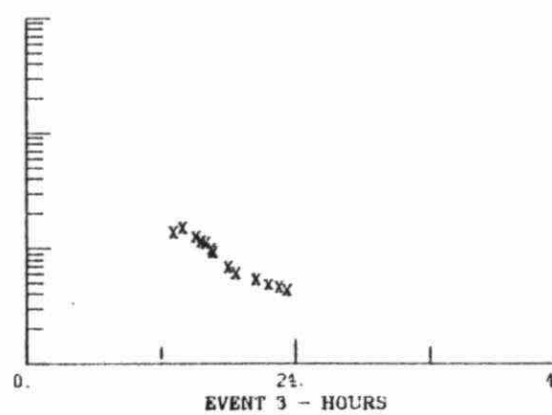
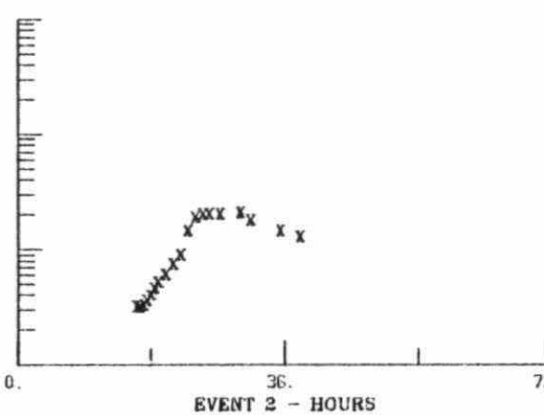
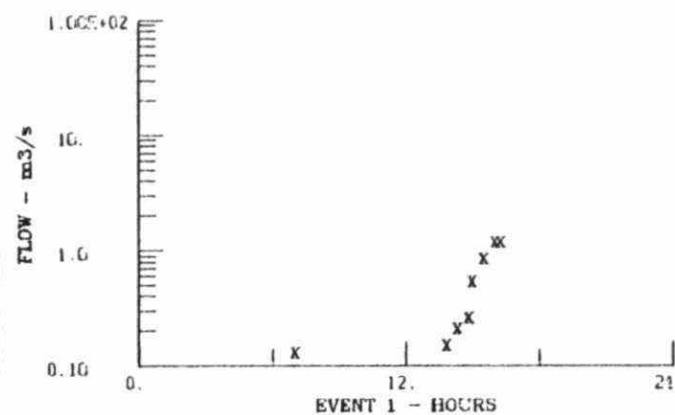
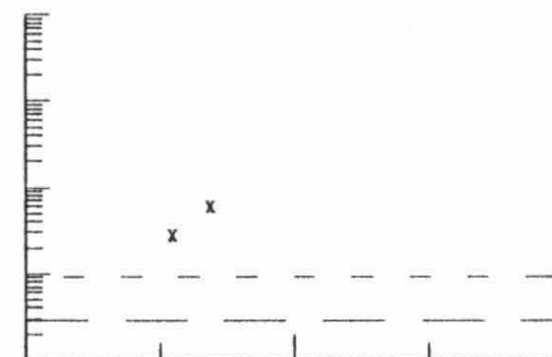
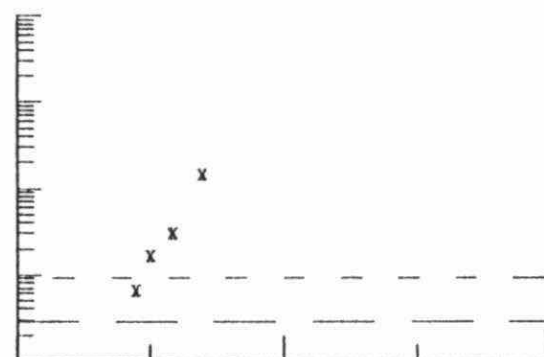
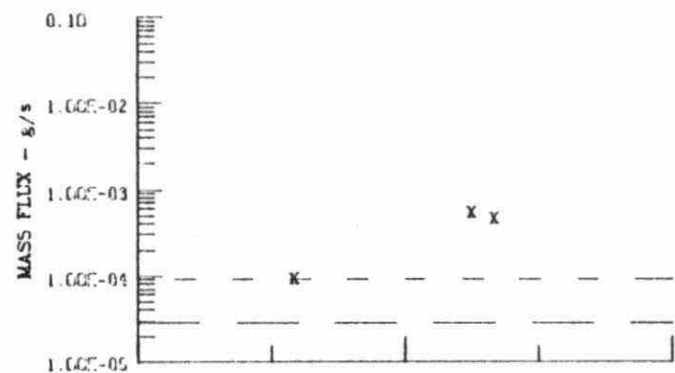
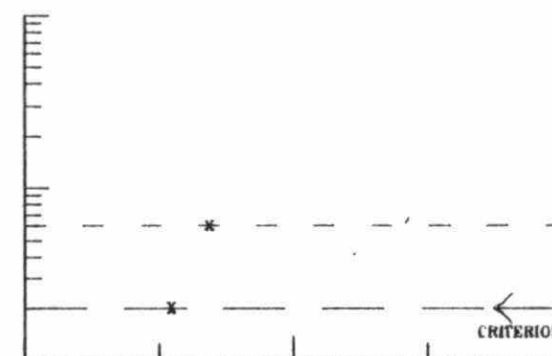
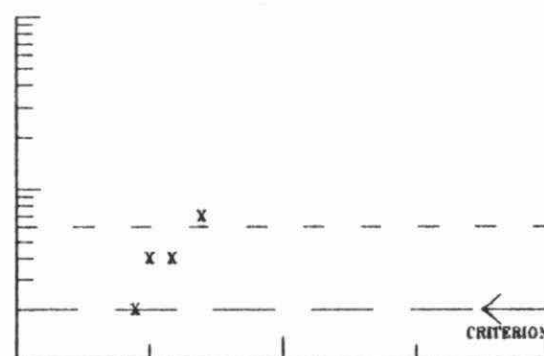
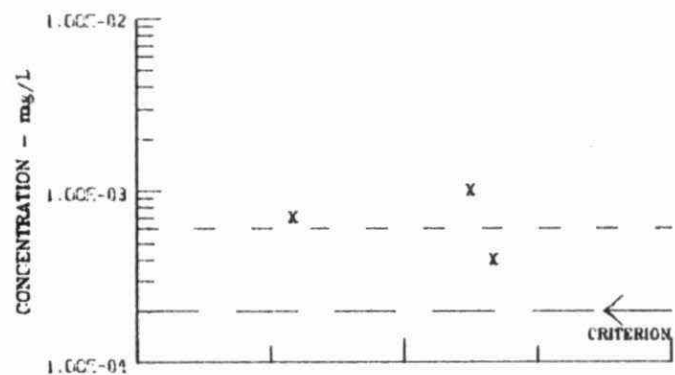
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - RESIDUE - PARTICULATE



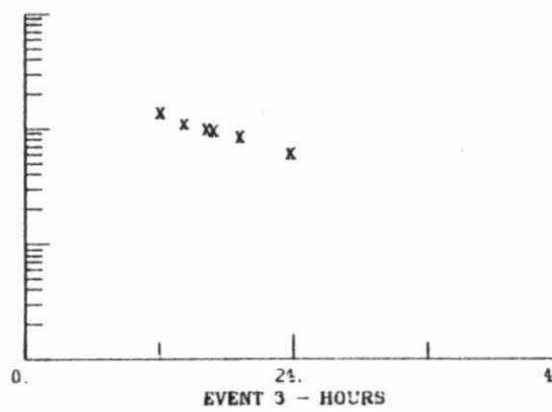
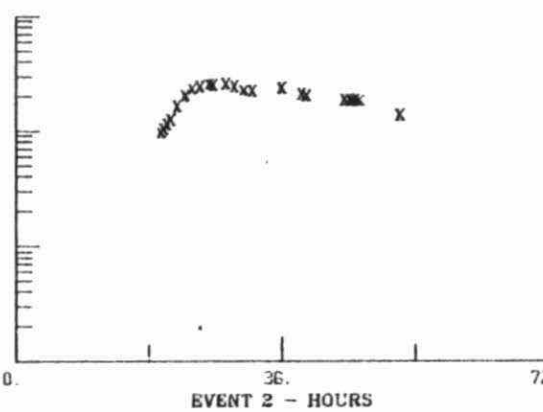
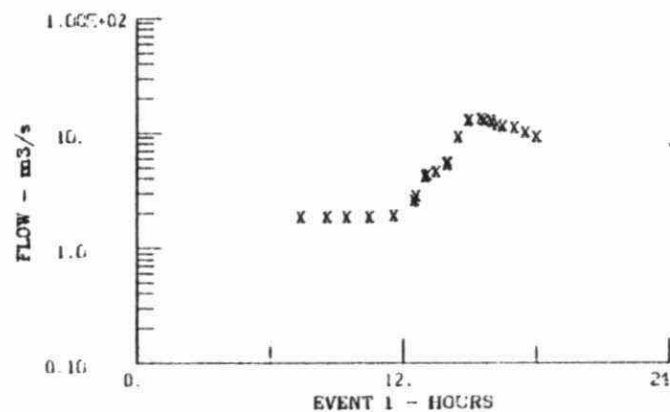
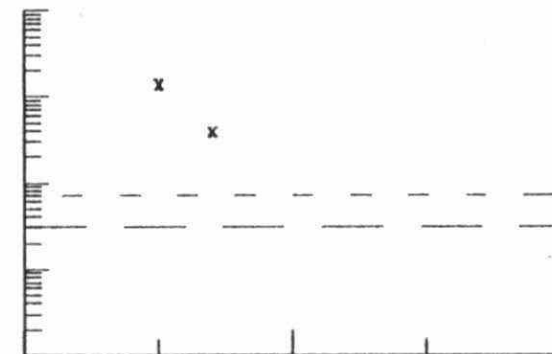
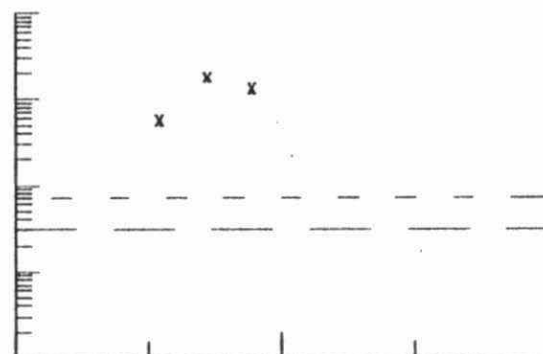
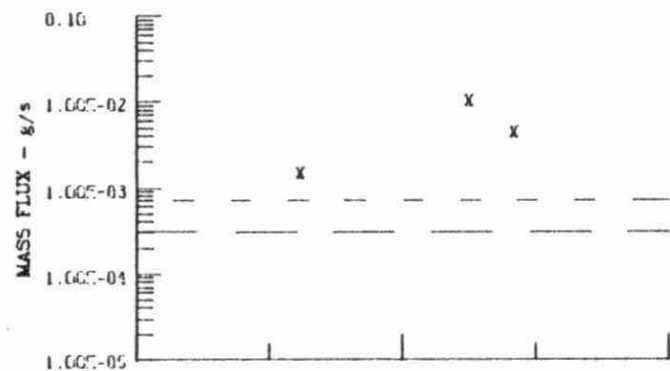
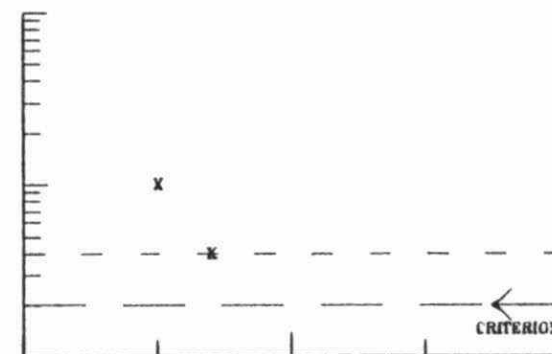
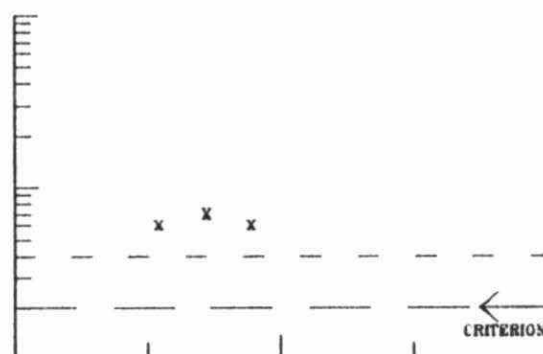
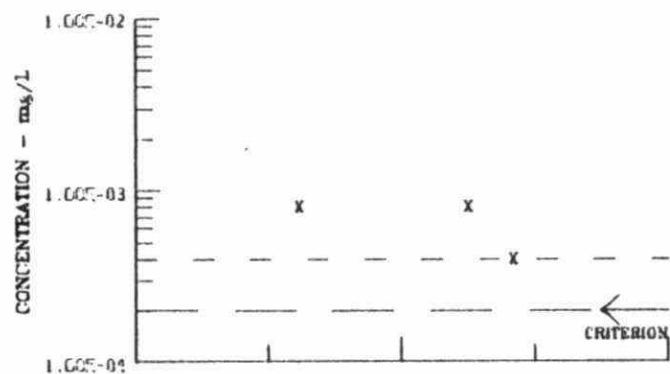
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - RESIDUE - PARTICULATE



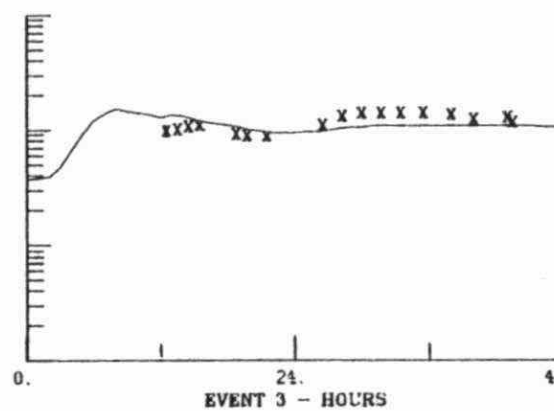
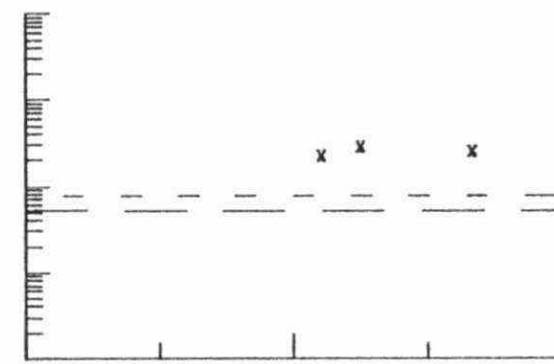
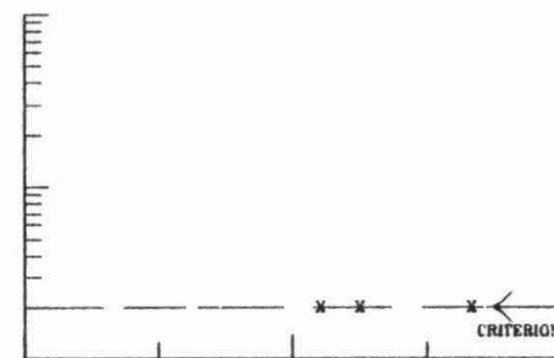
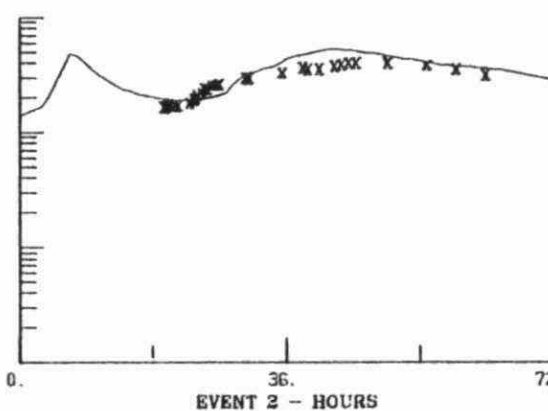
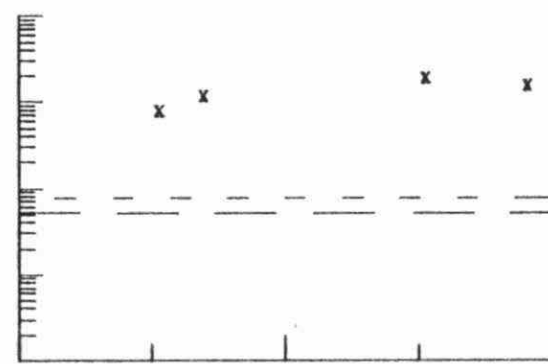
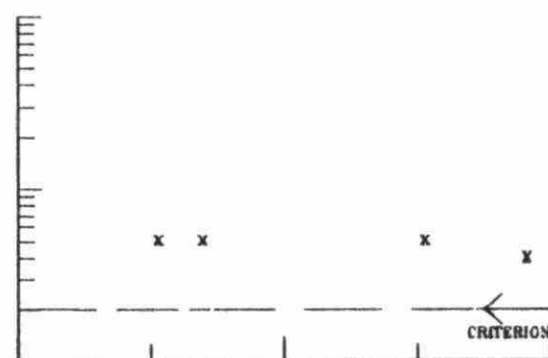
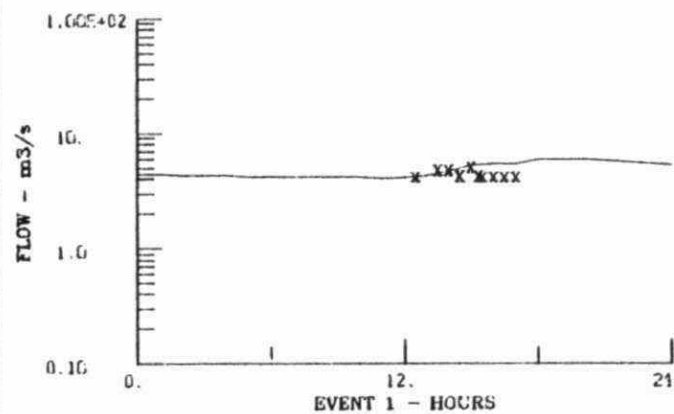
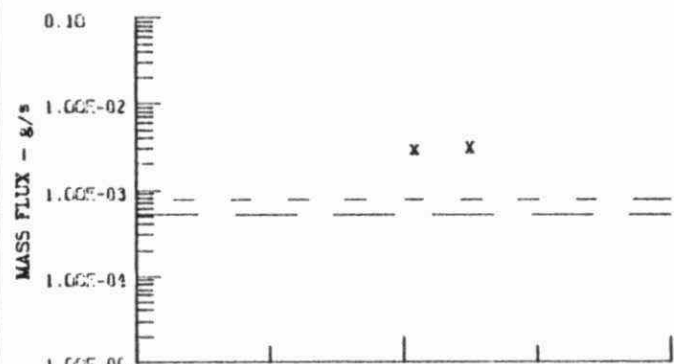
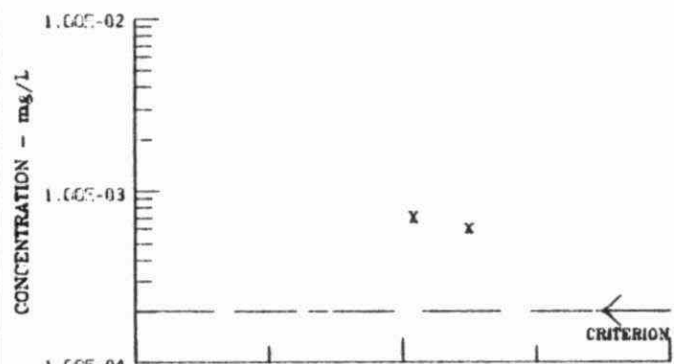
CADMIUM



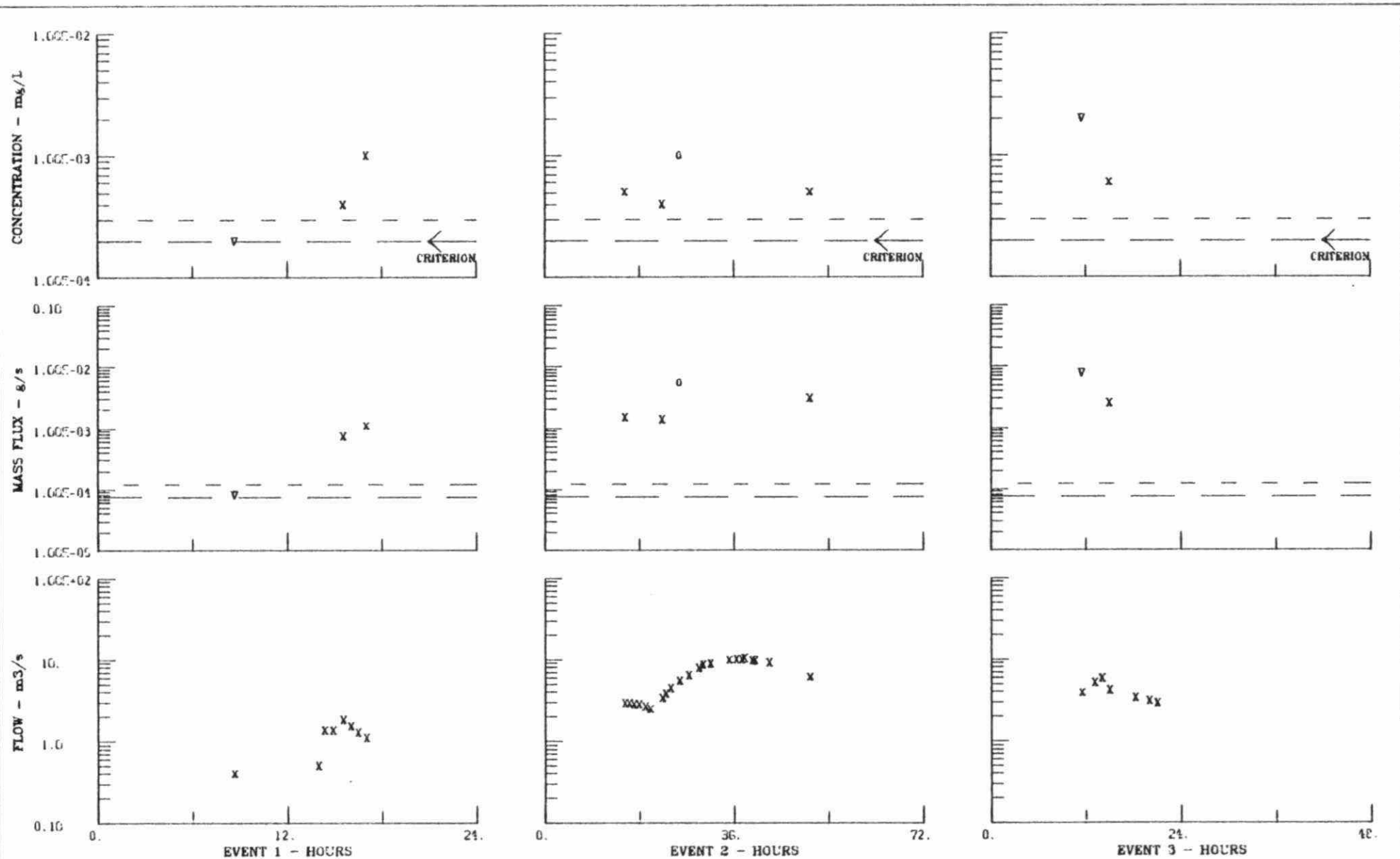
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - CADMIUM



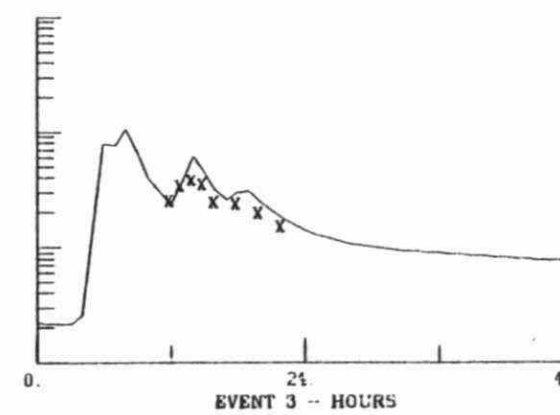
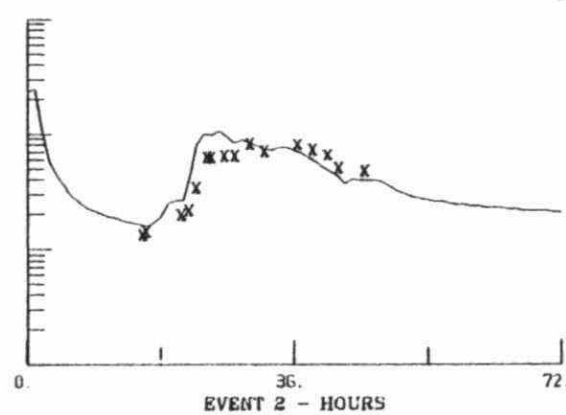
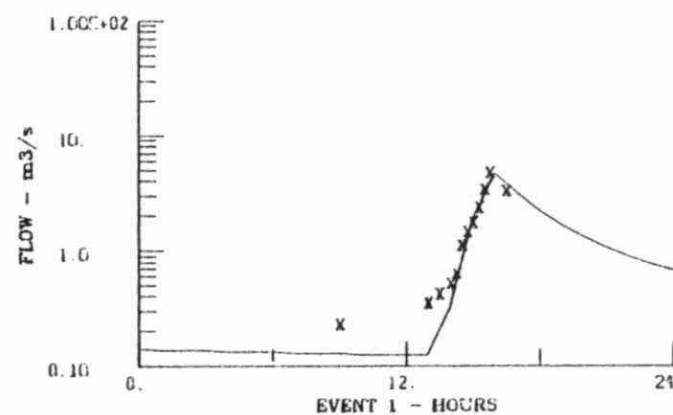
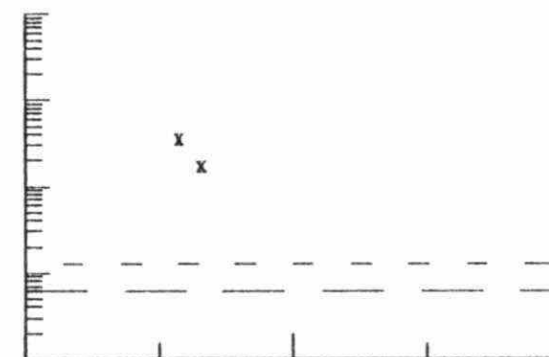
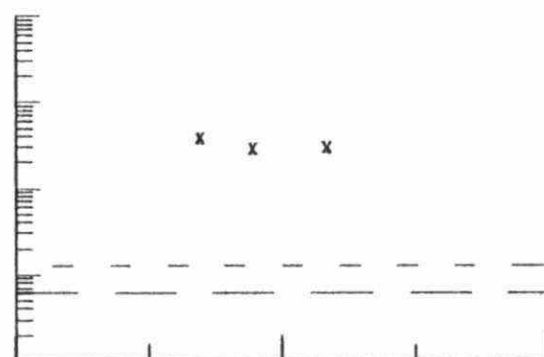
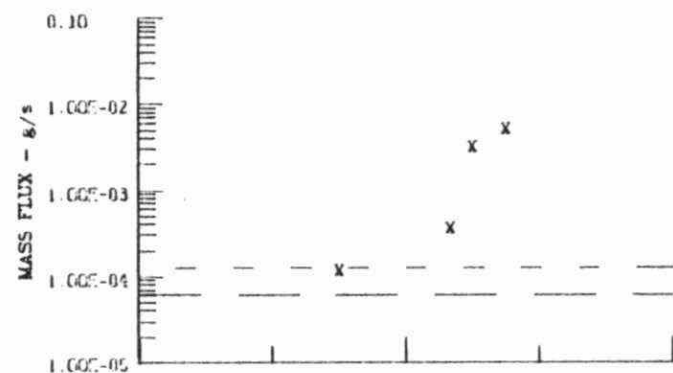
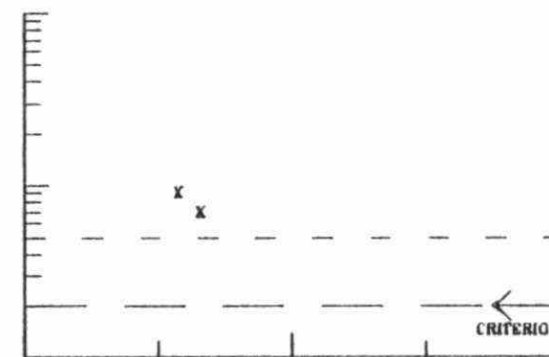
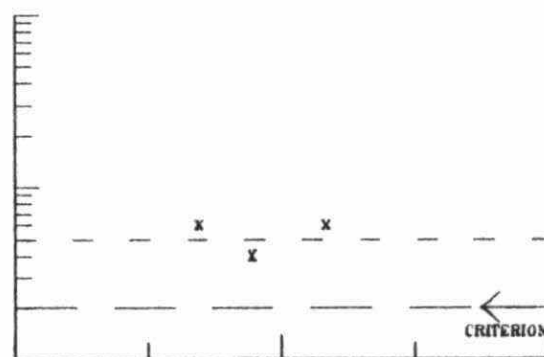
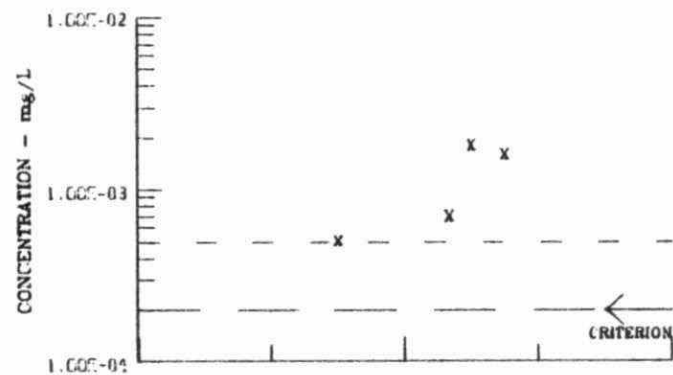
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - CADMIUM



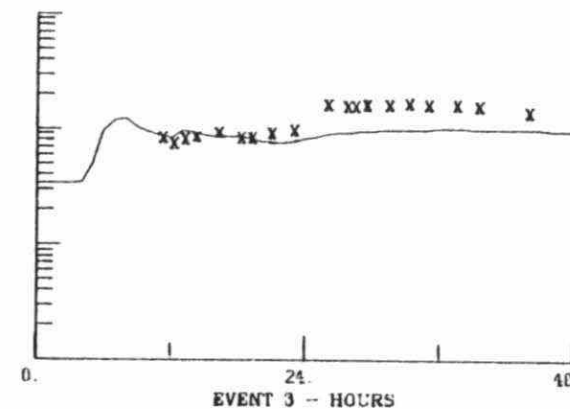
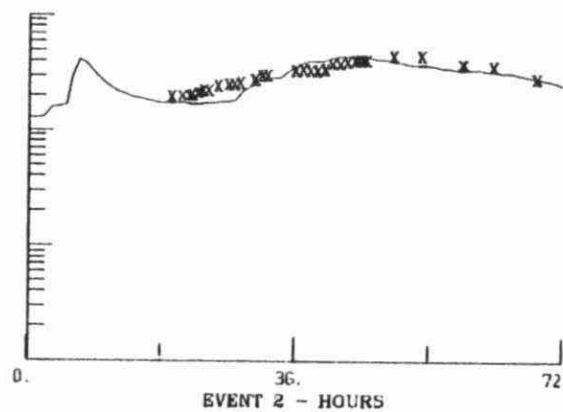
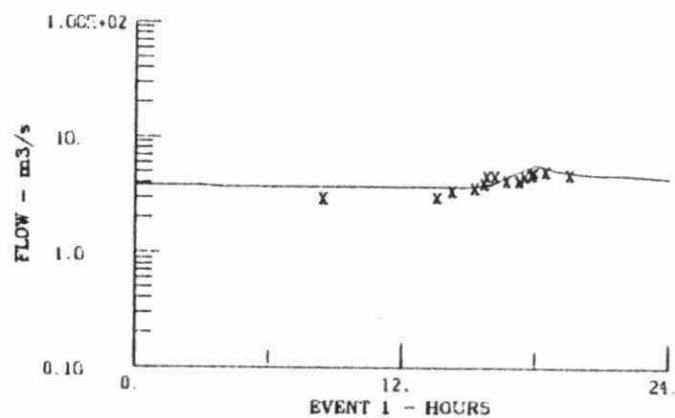
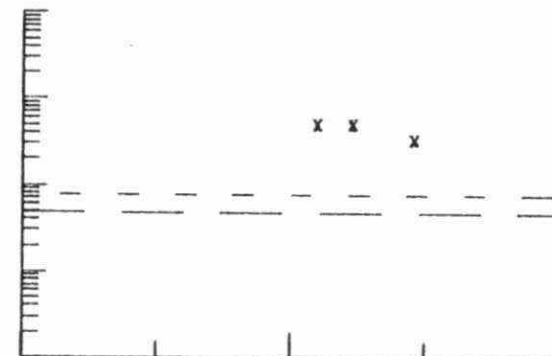
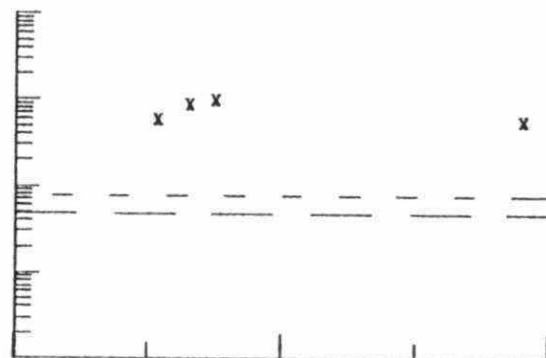
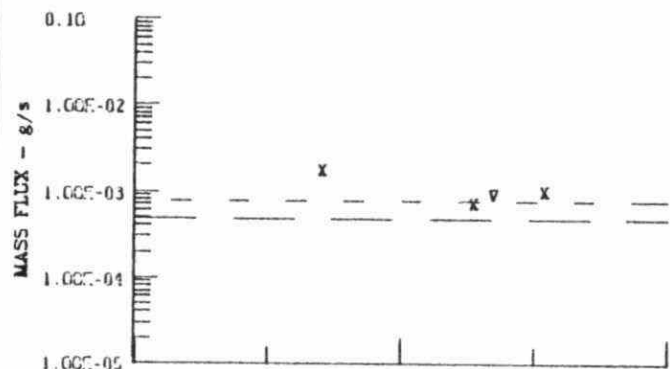
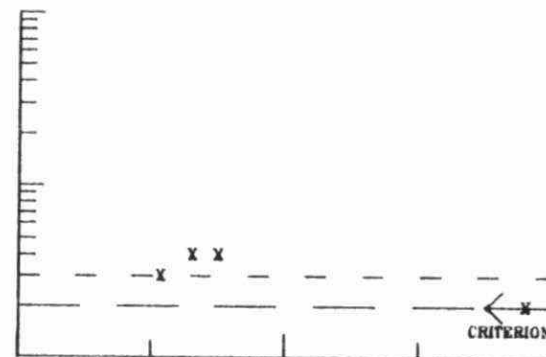
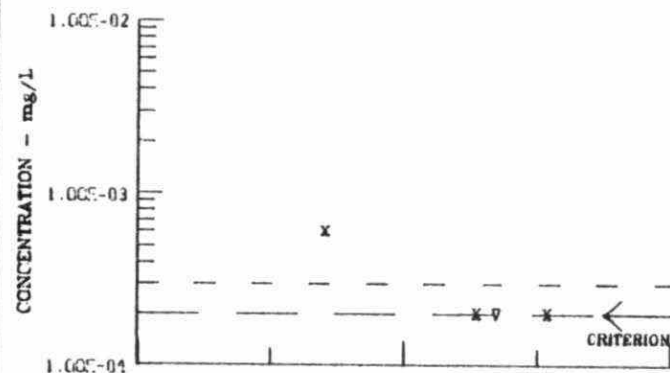
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - CADMIUM



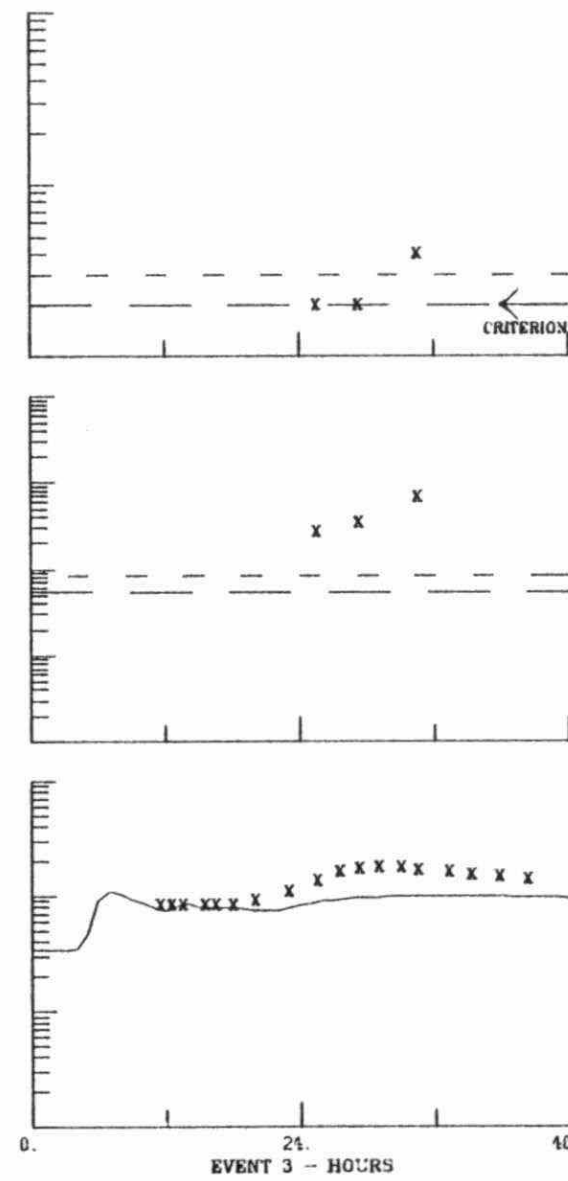
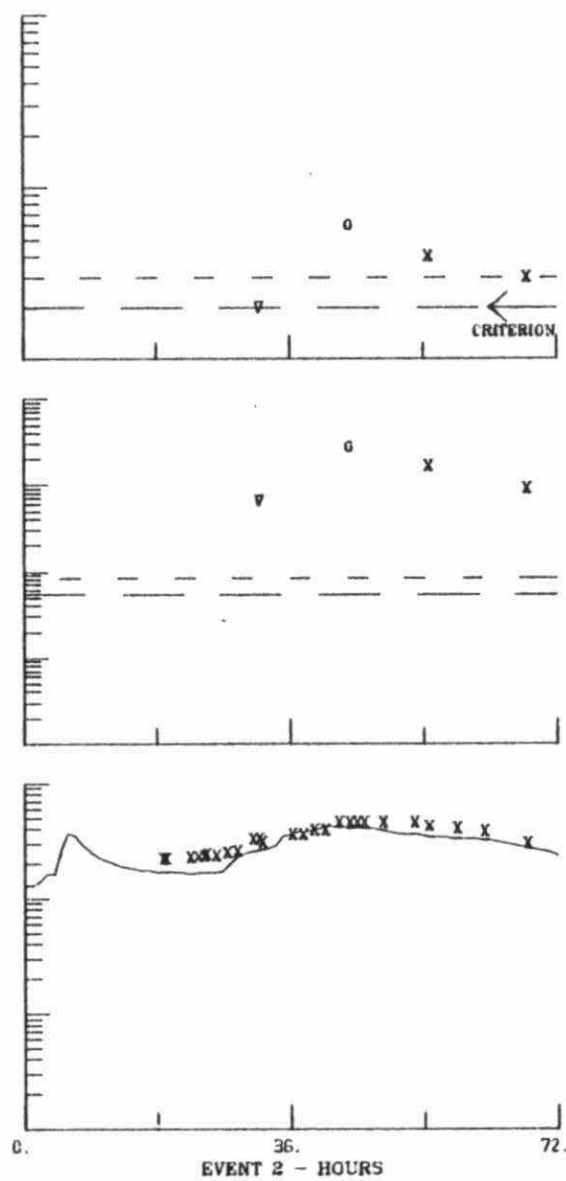
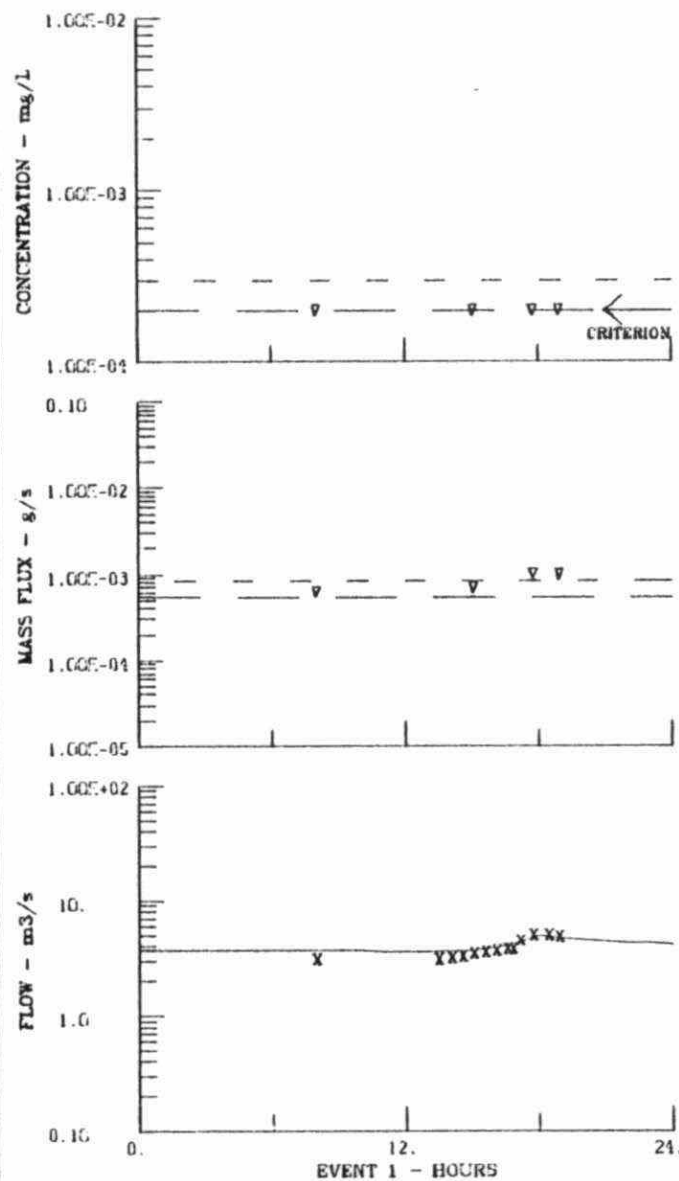
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - CADMIUM



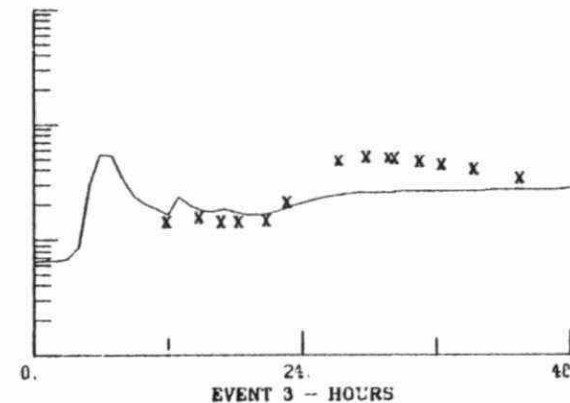
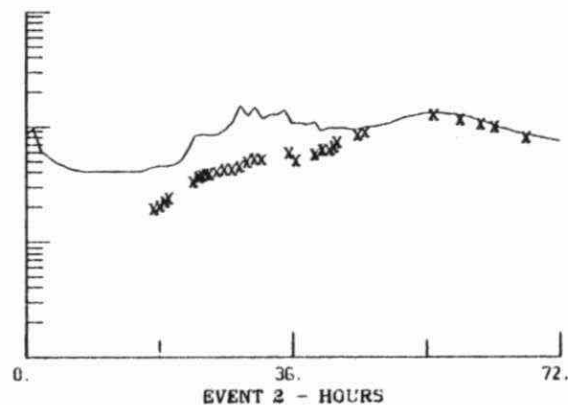
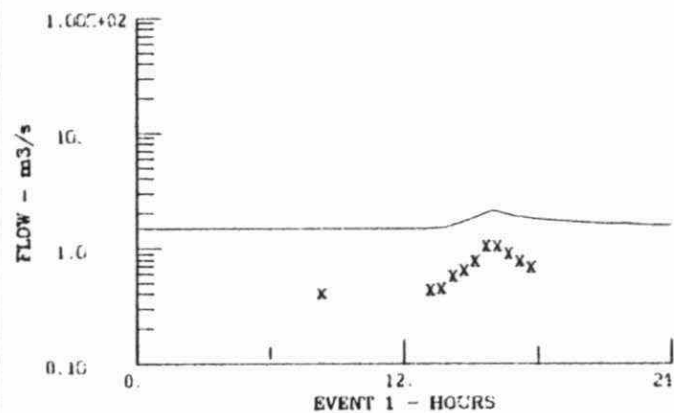
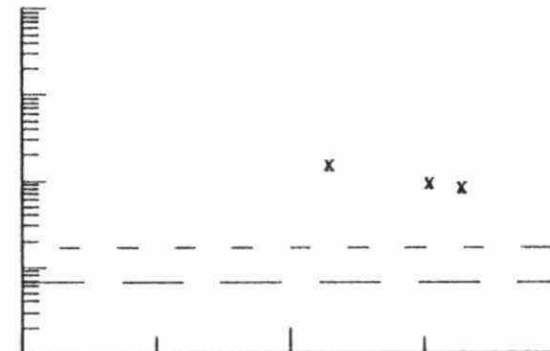
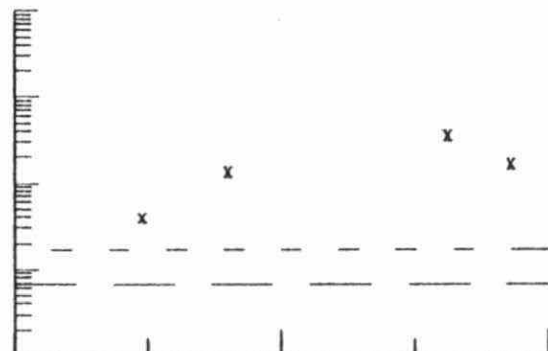
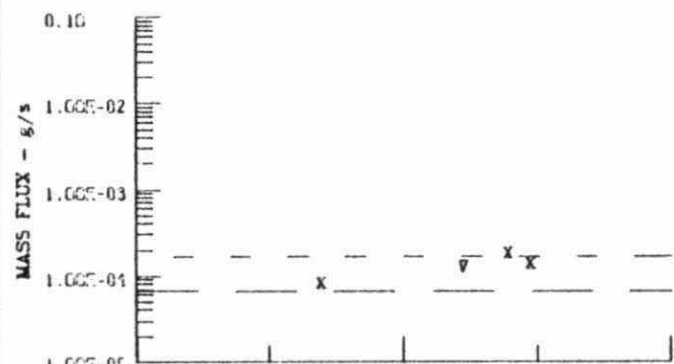
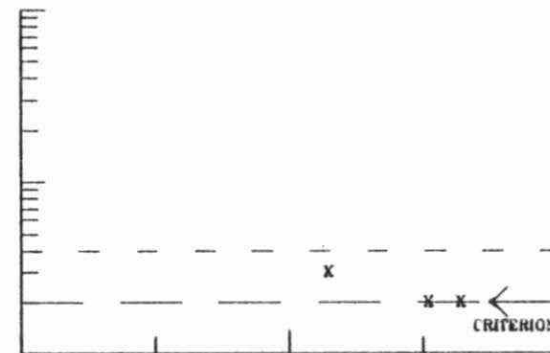
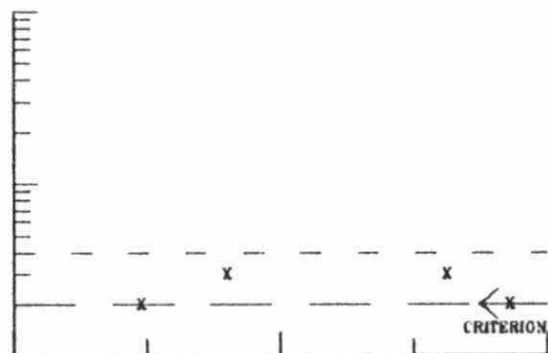
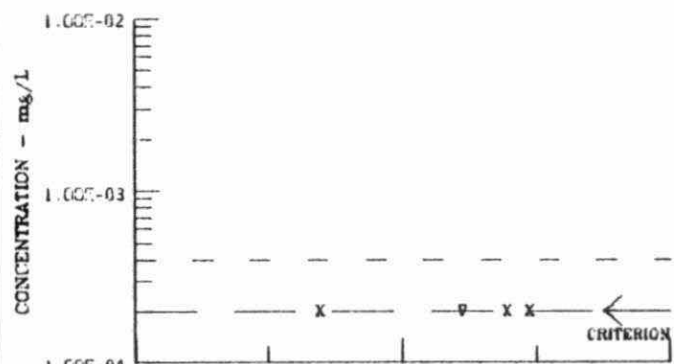
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - CADMIUM



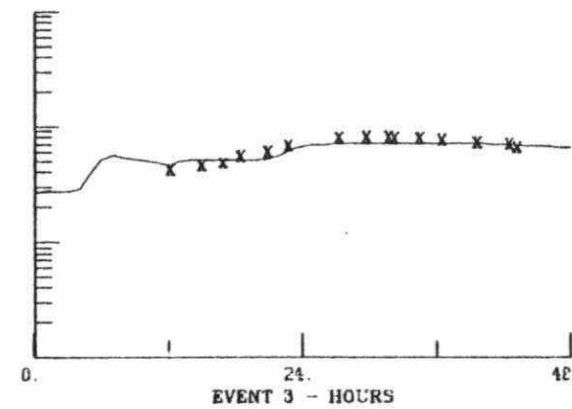
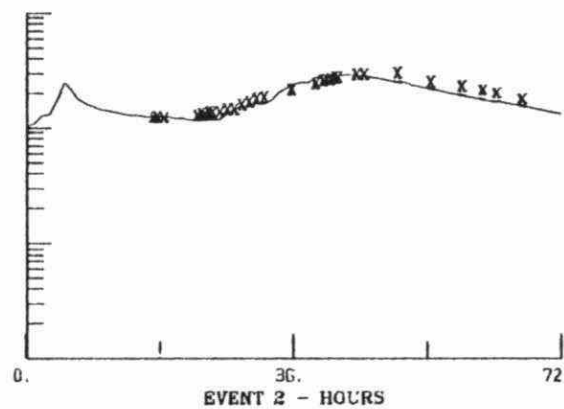
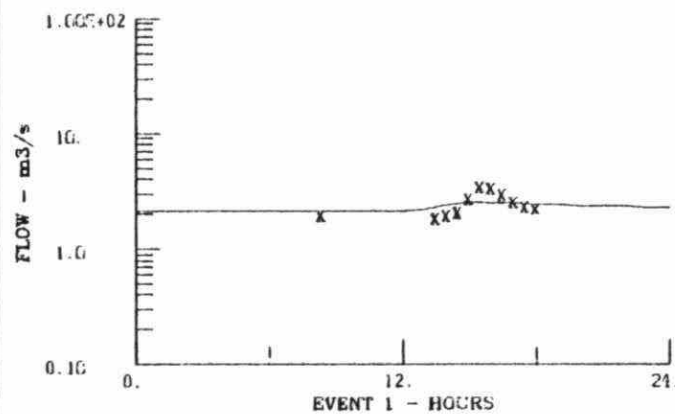
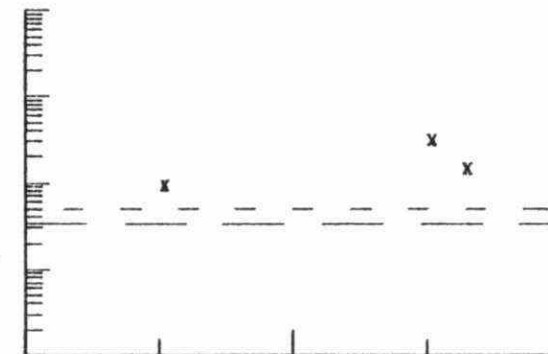
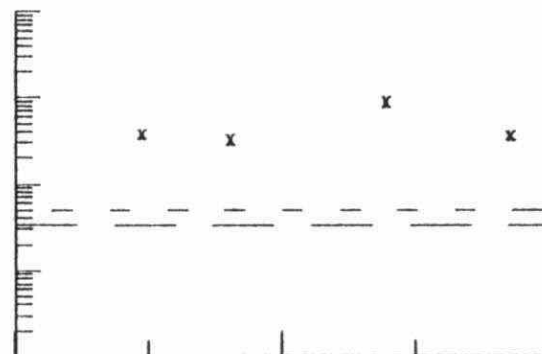
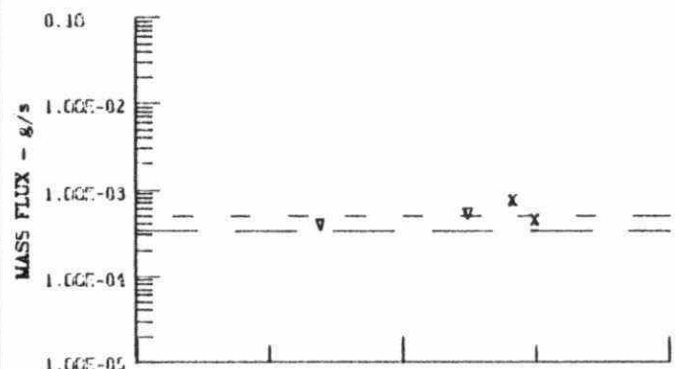
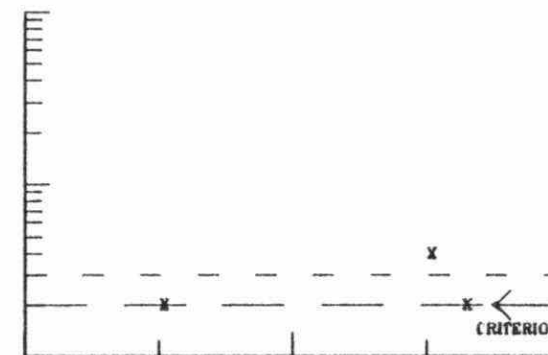
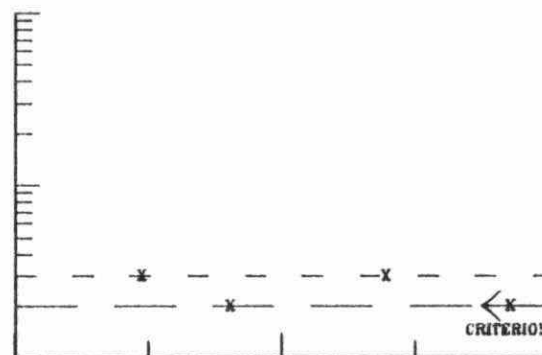
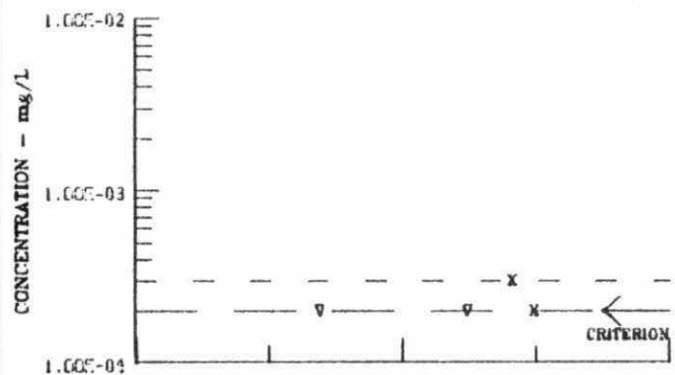
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - CADMIUM



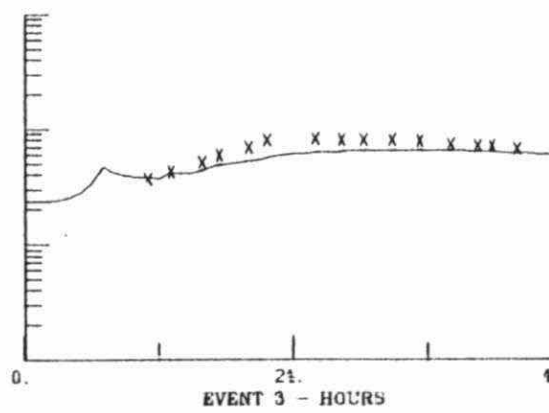
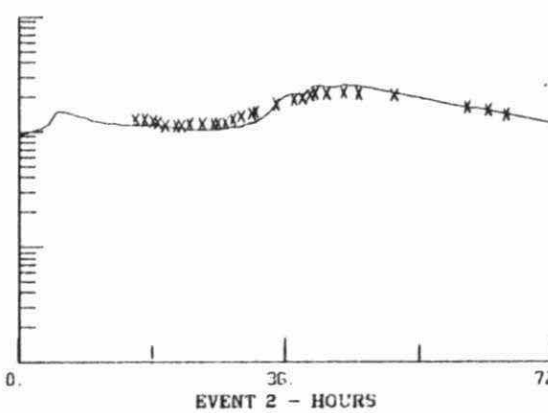
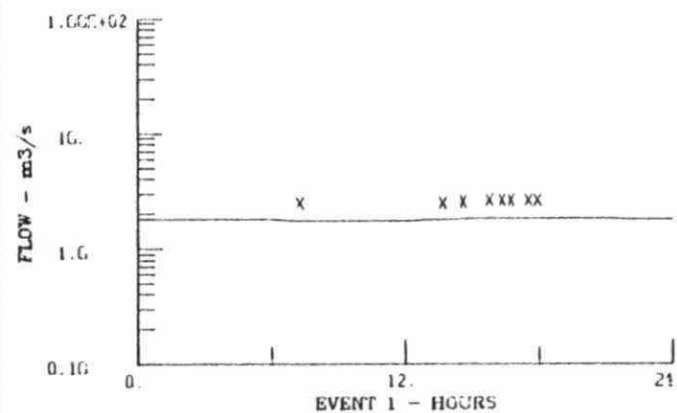
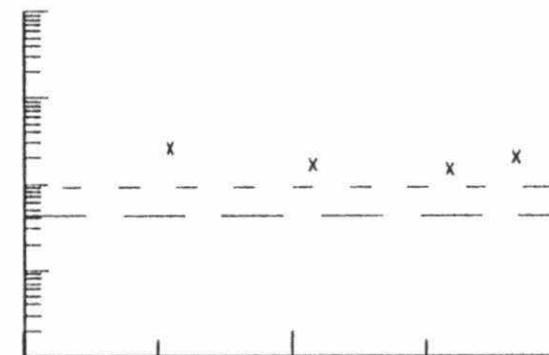
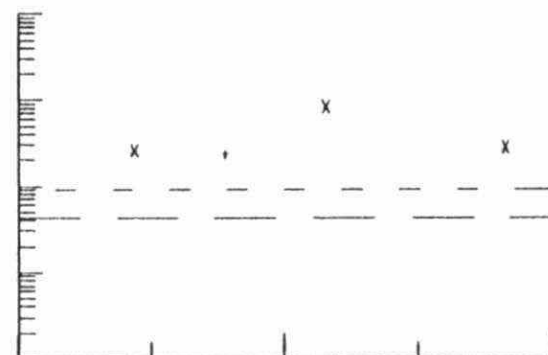
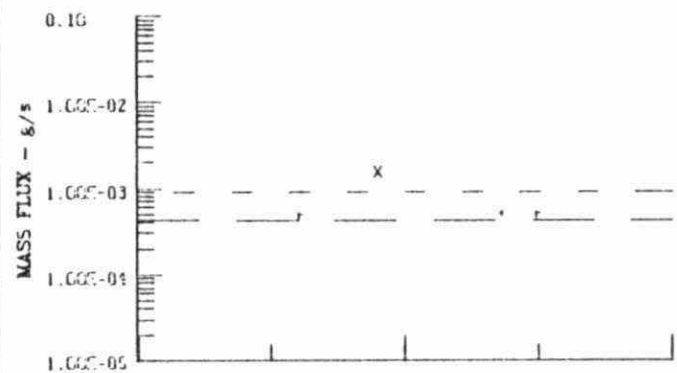
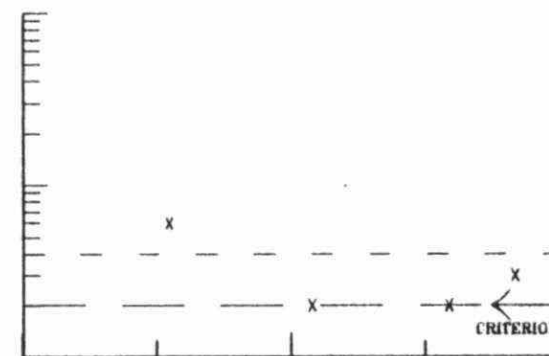
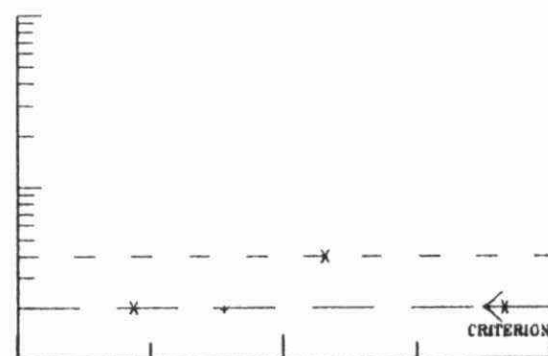
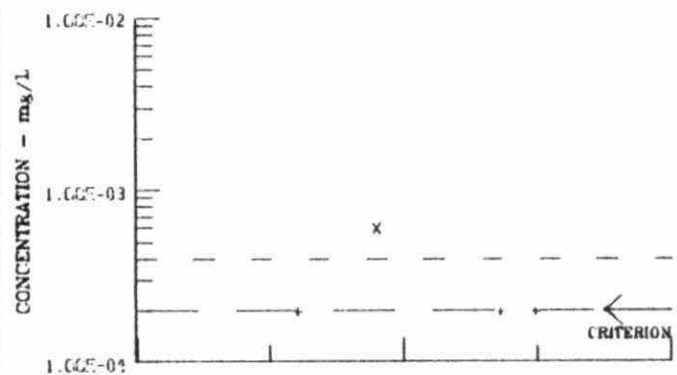
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - CADMIUM



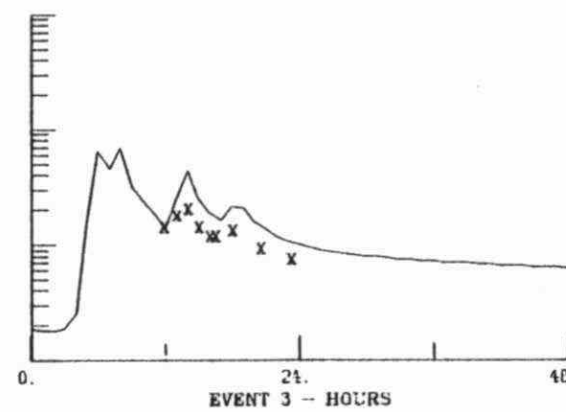
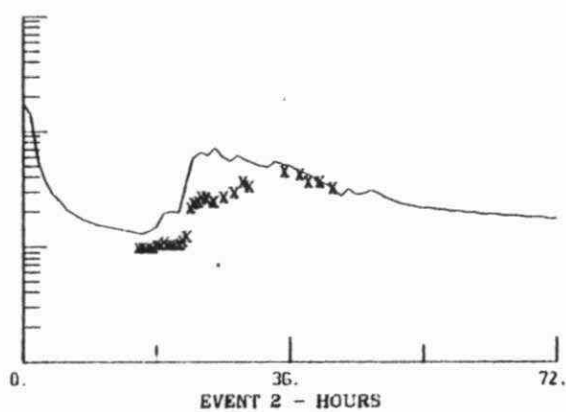
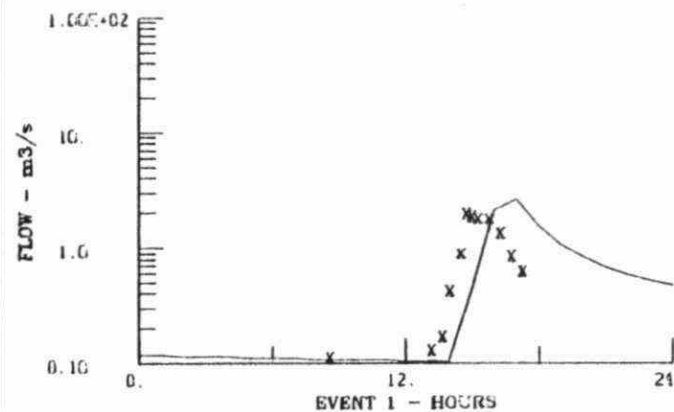
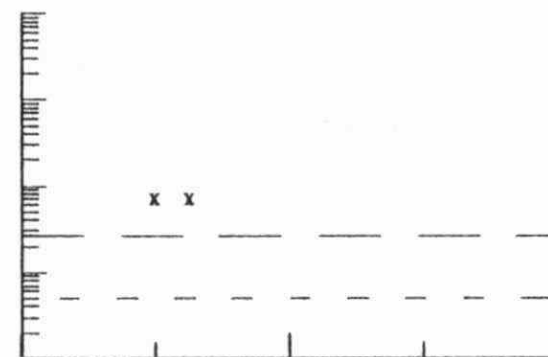
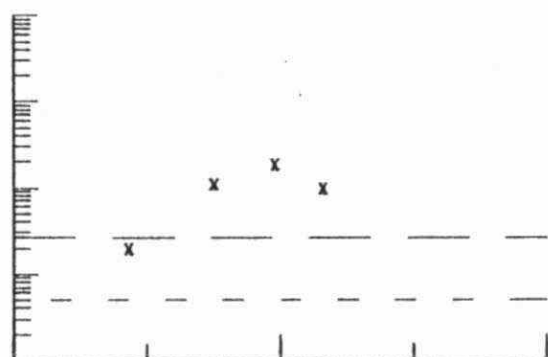
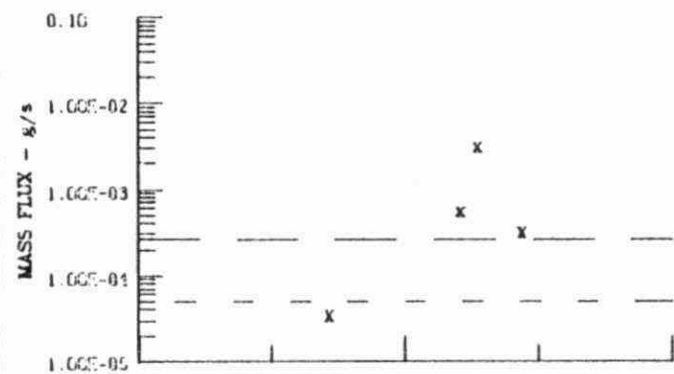
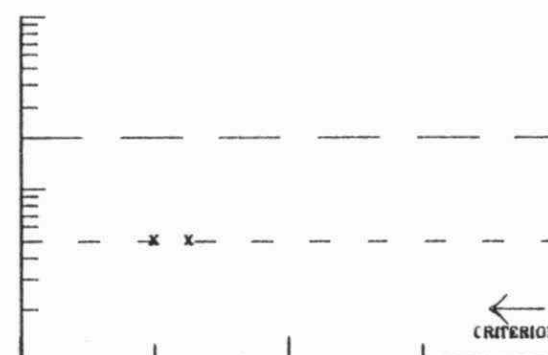
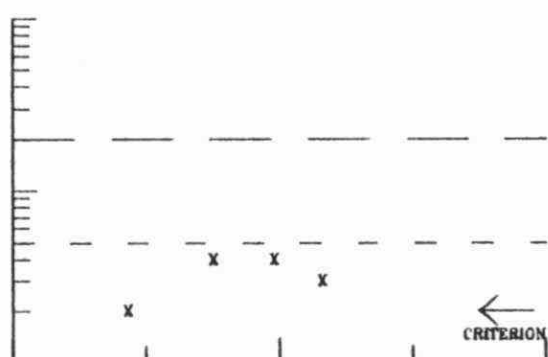
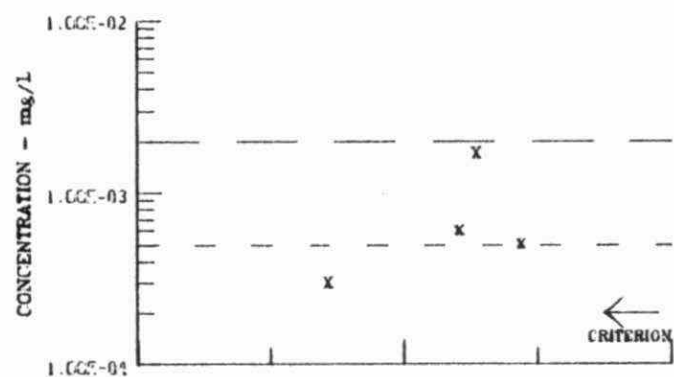
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - CADMIUM



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - CADMIUM

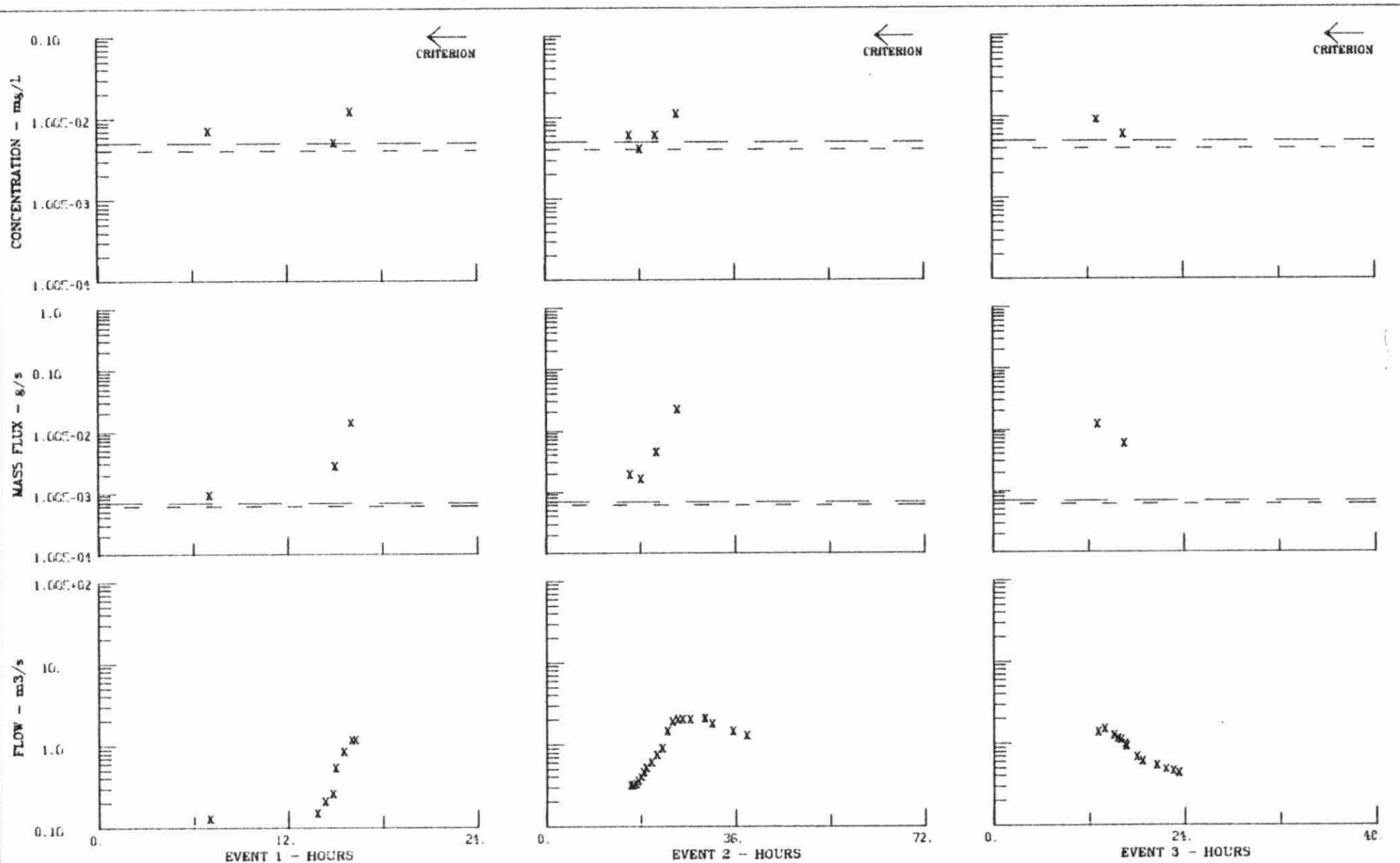


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - CADMIUM

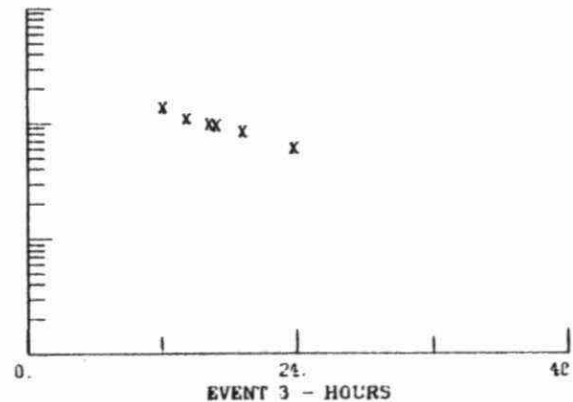
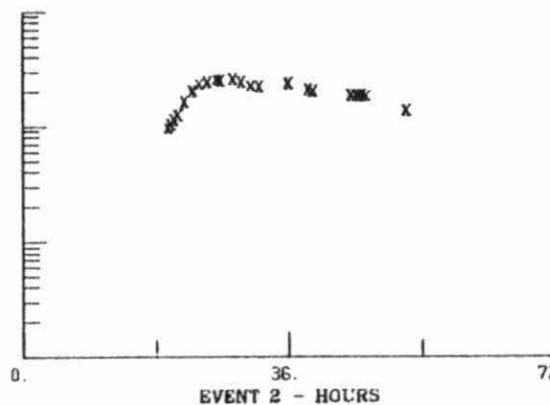
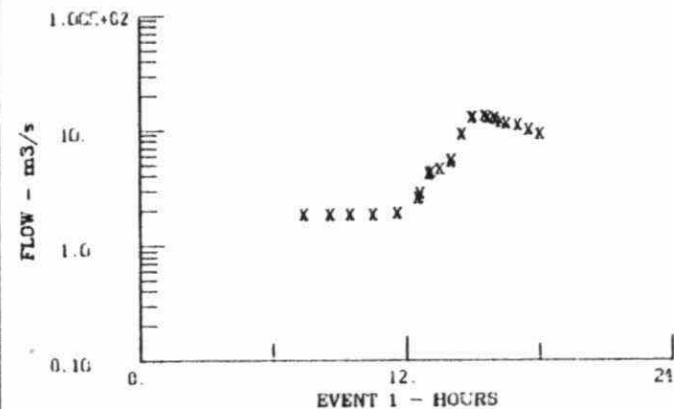
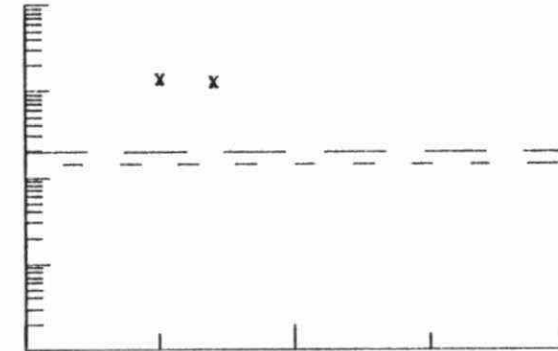
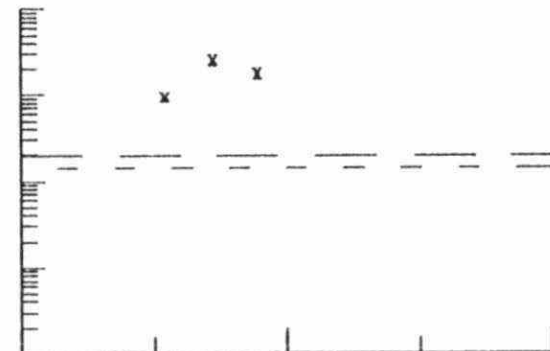
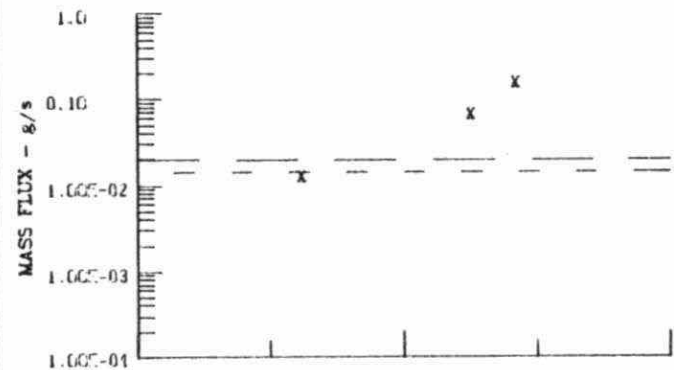
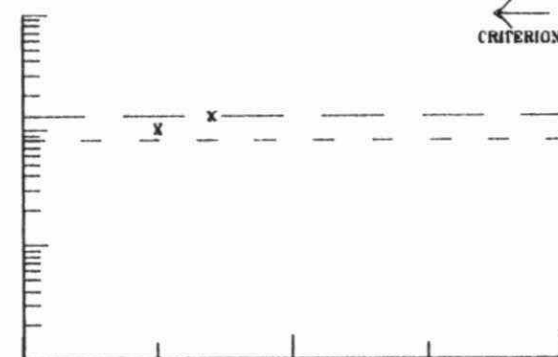
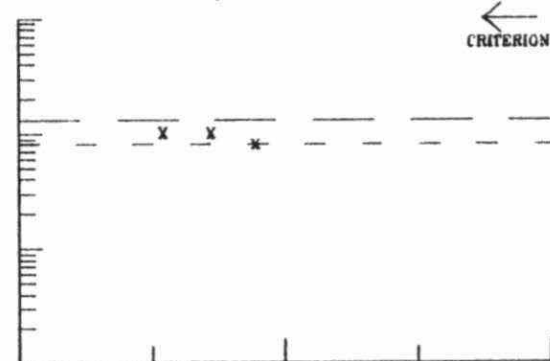
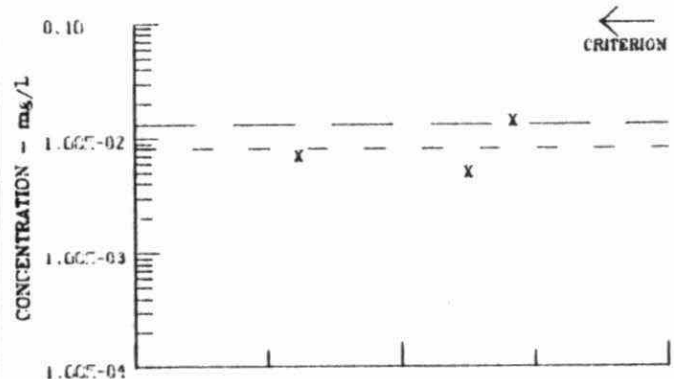


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - CADMIUM

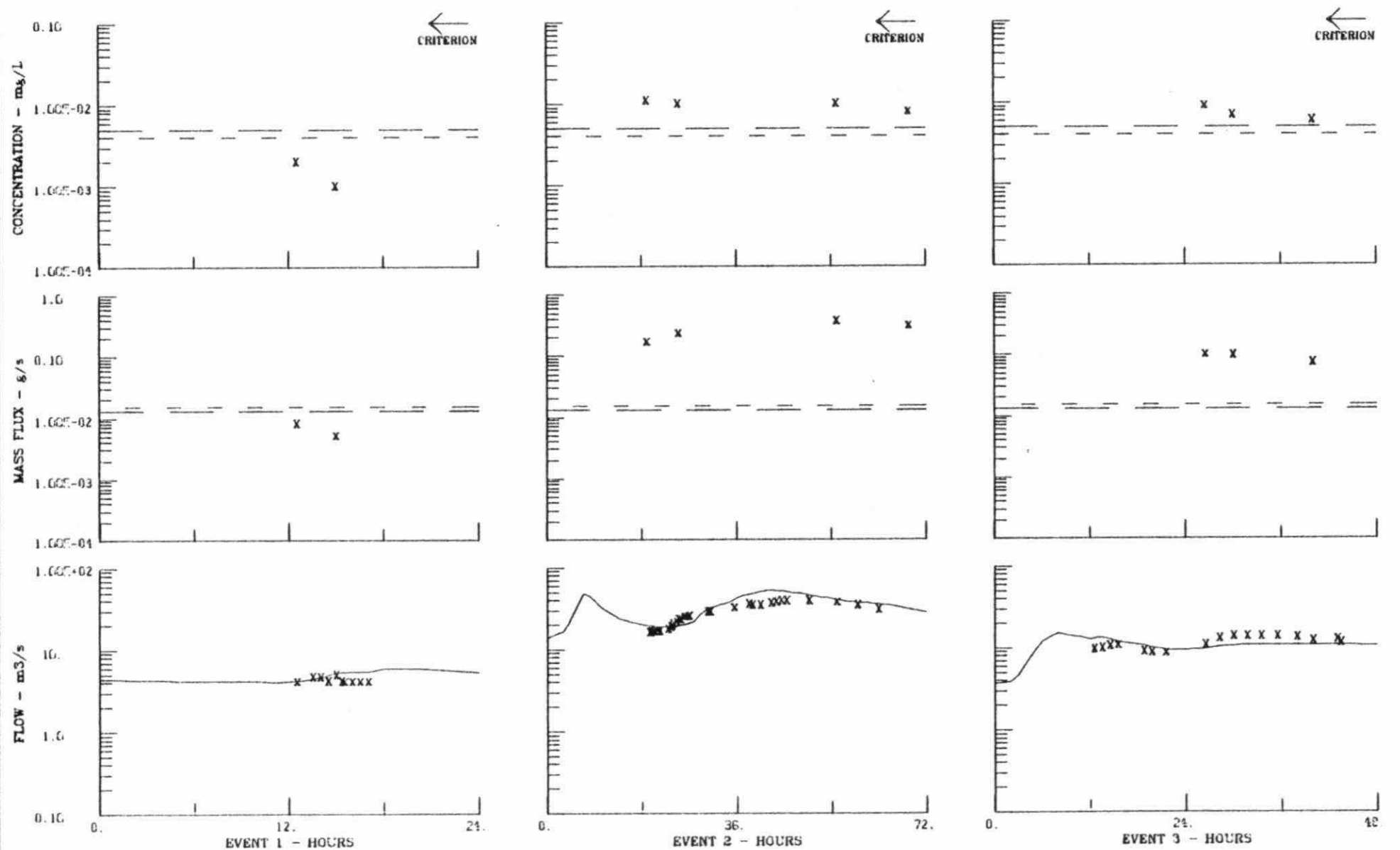
CHROMIUM



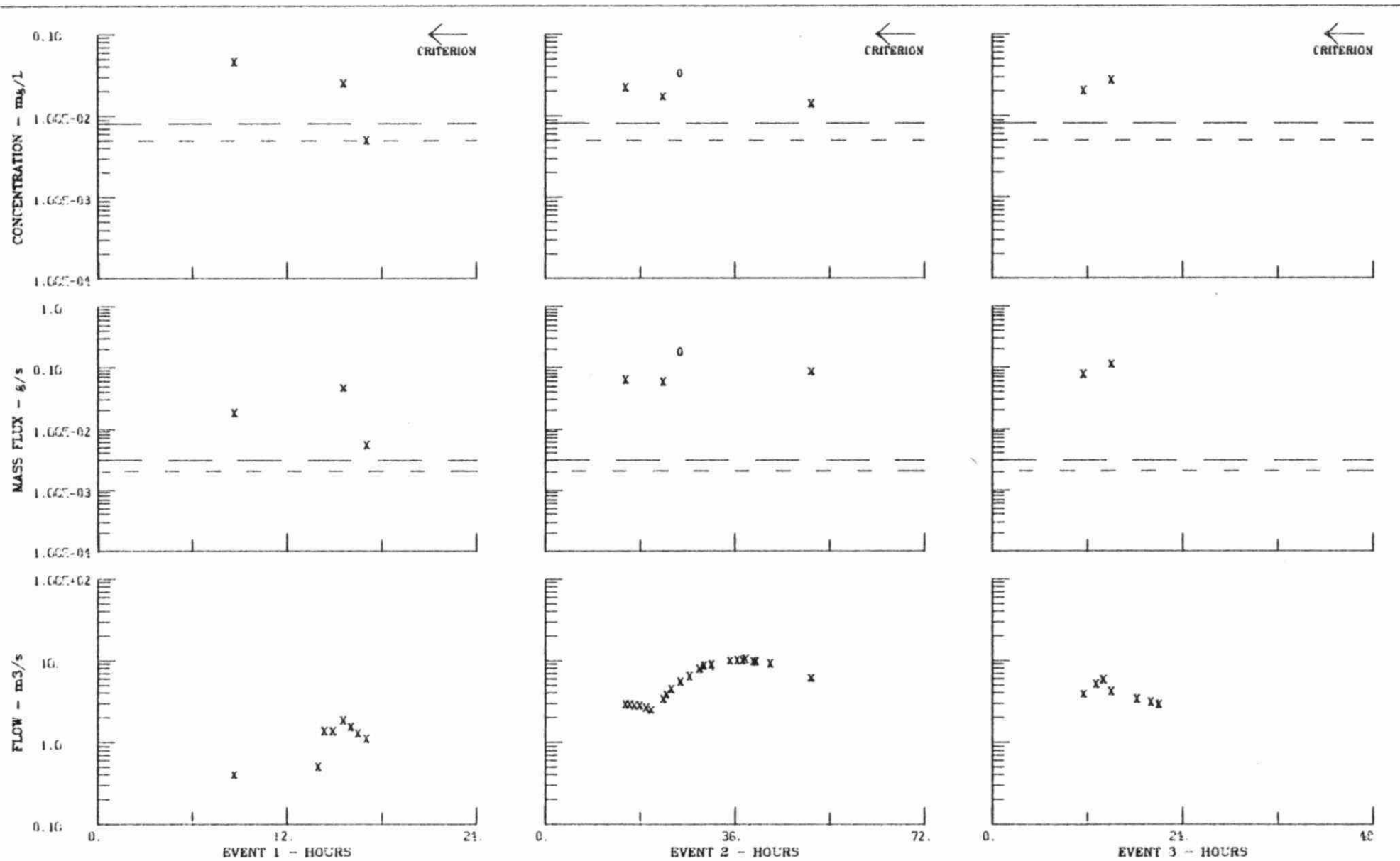
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - CHROMIUM



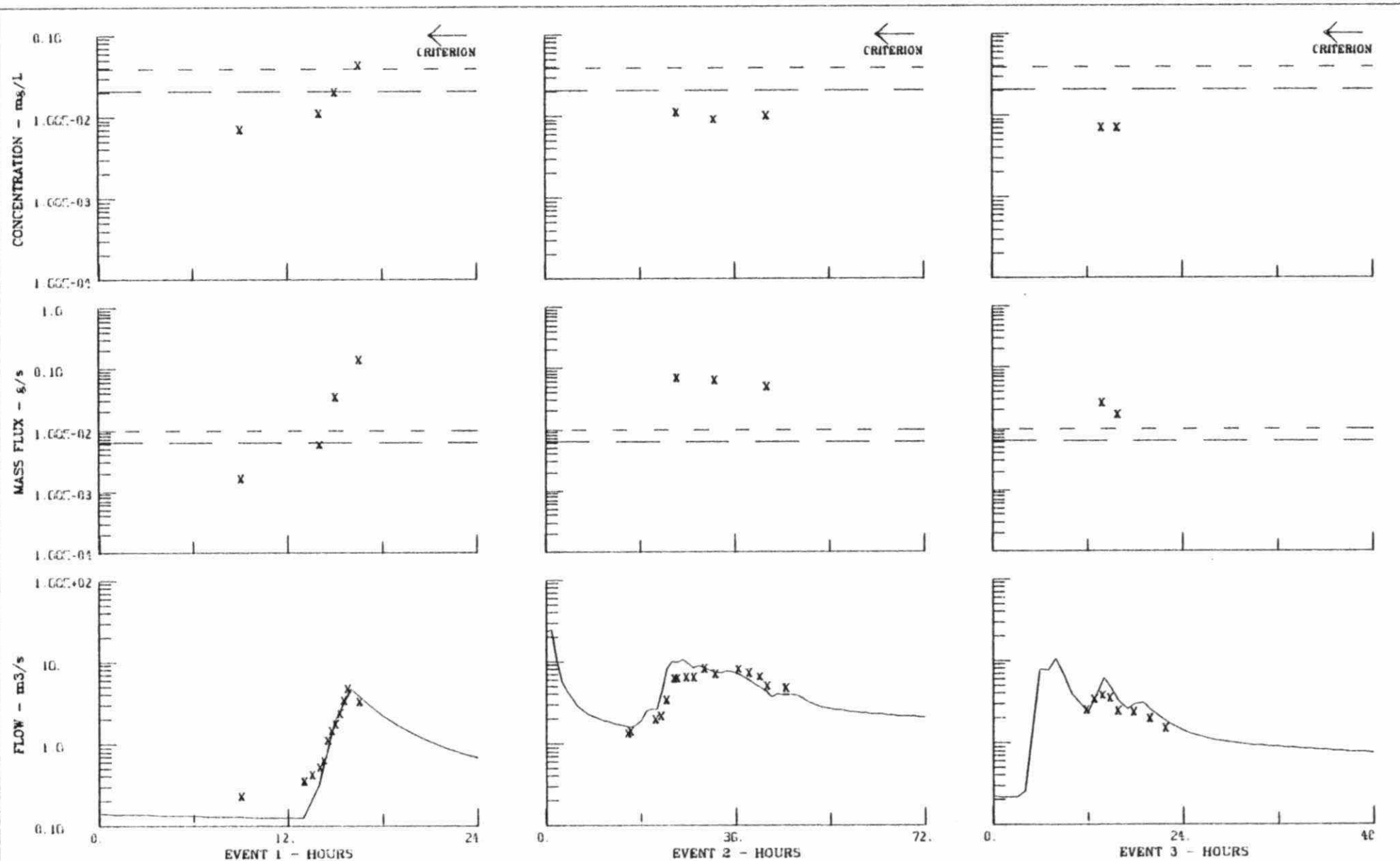
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - CHROMIUM



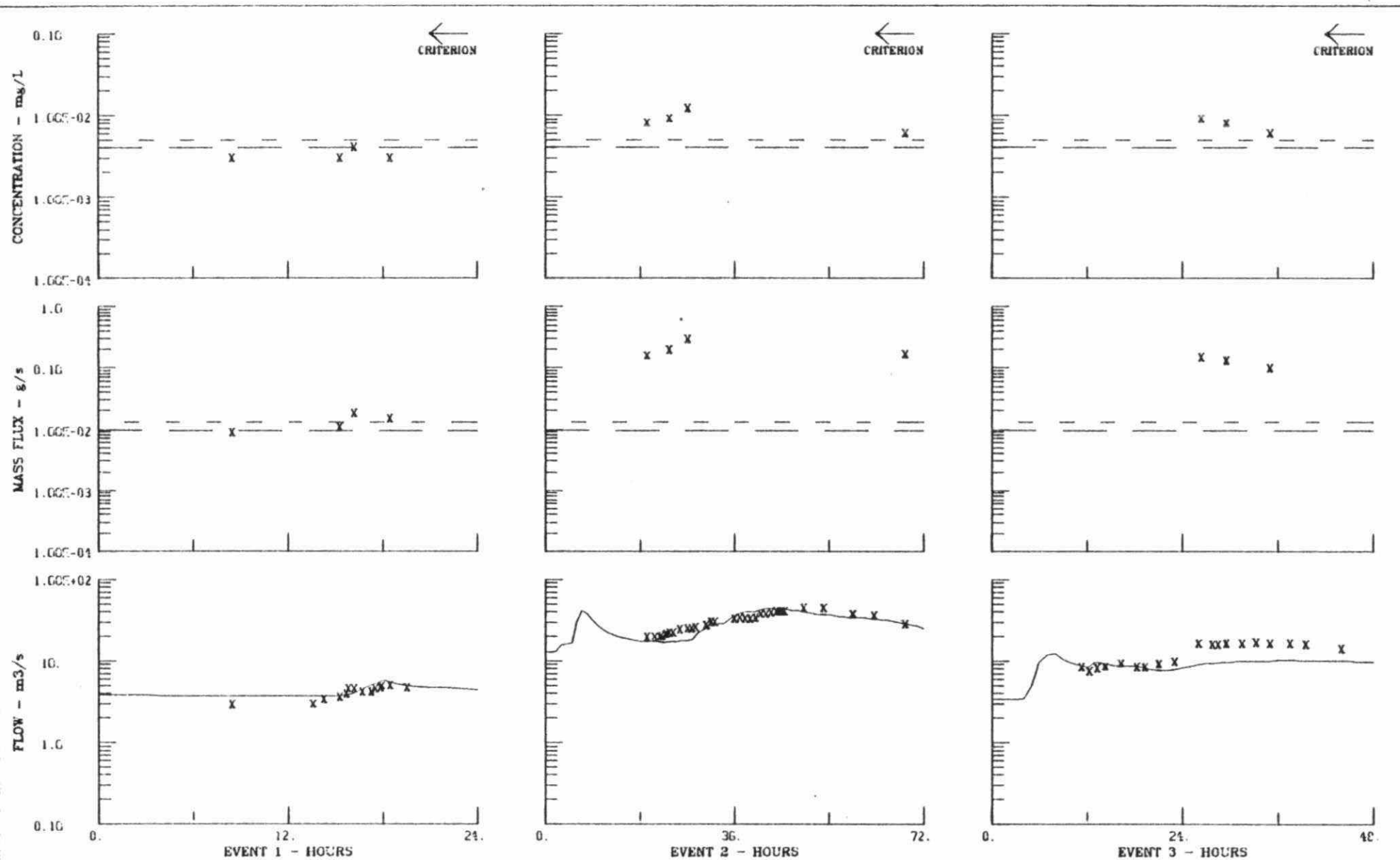
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - CHROMIUM



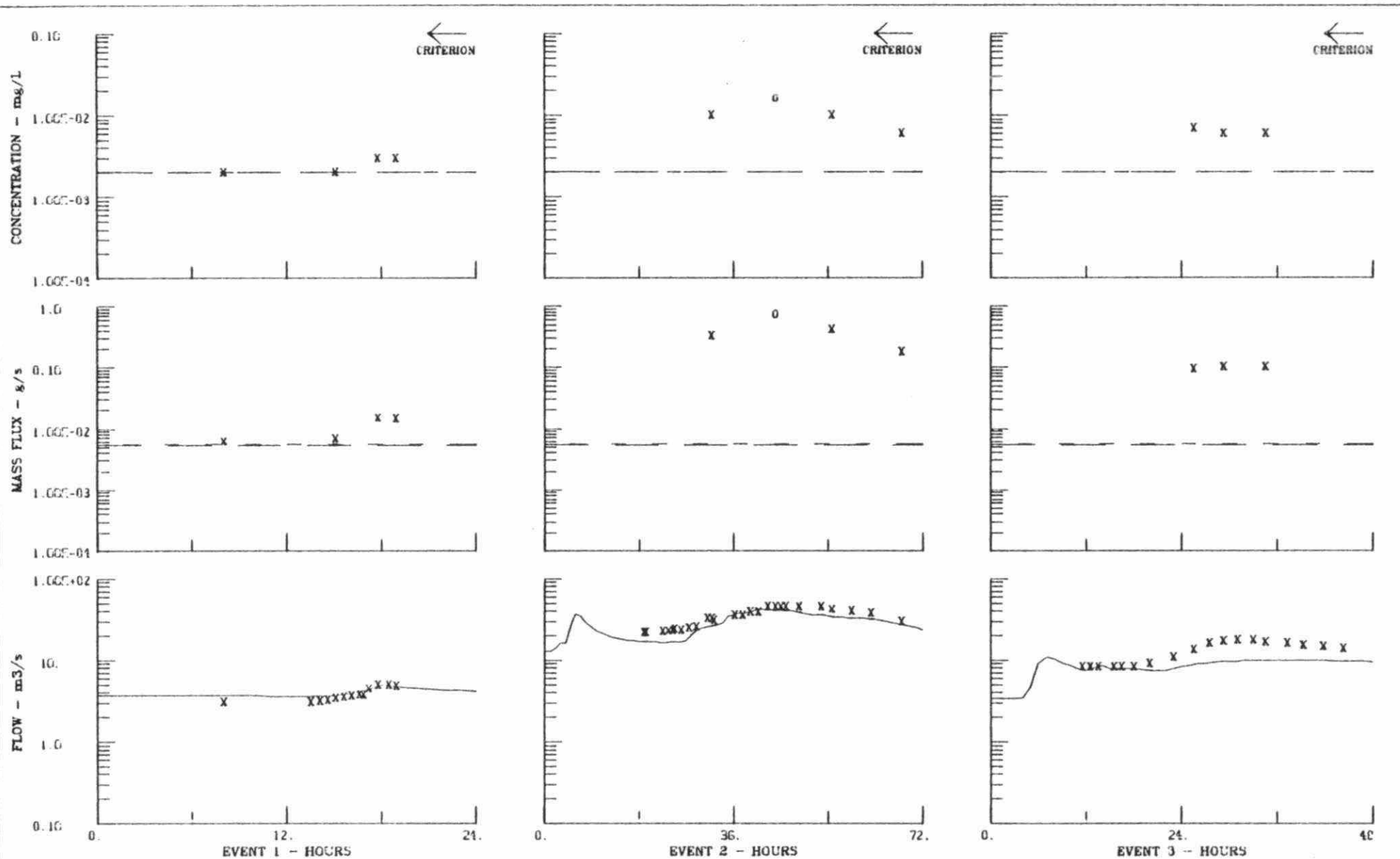
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - CHROMIUM



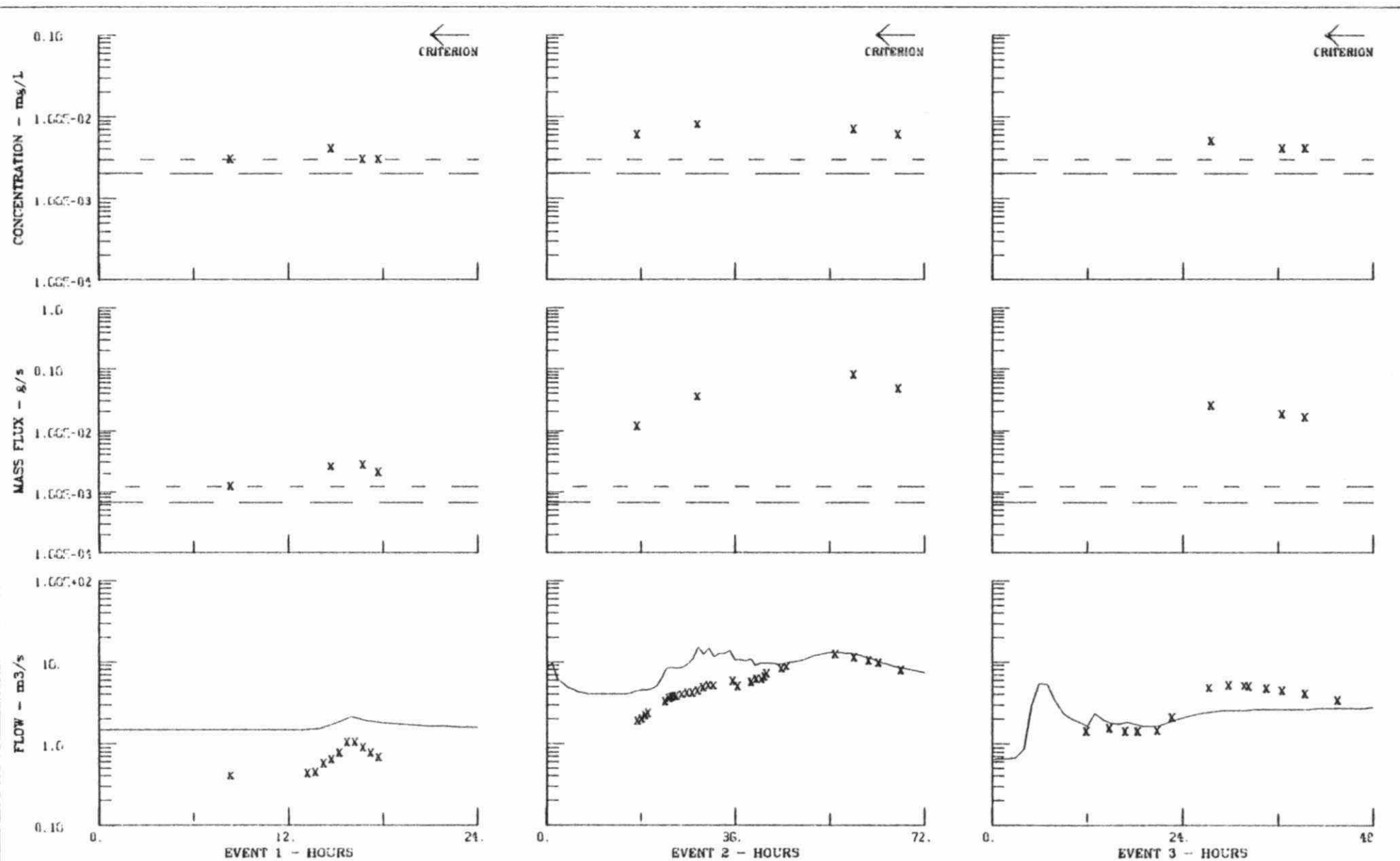
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - CHROMIUM



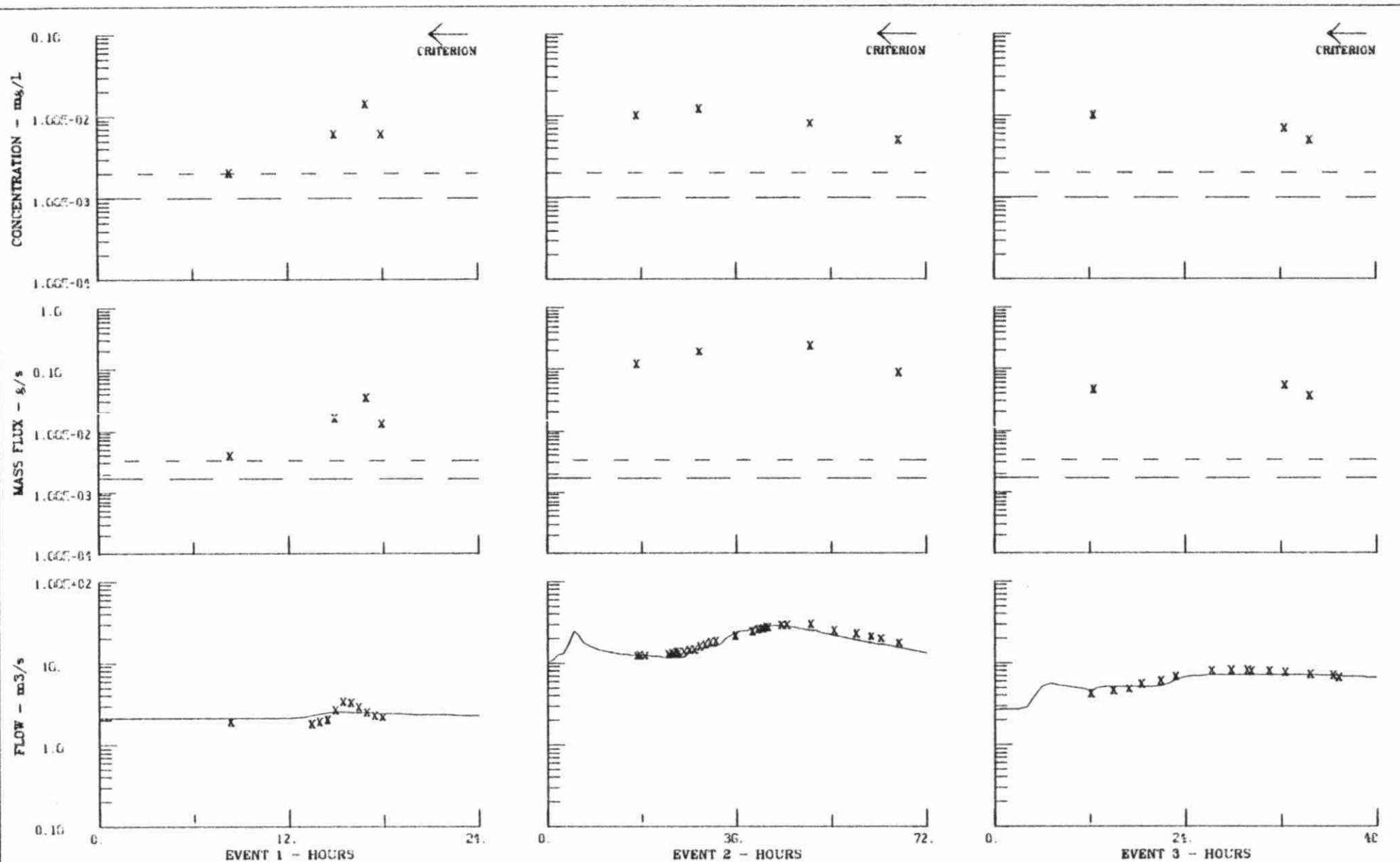
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - CHROMIUM



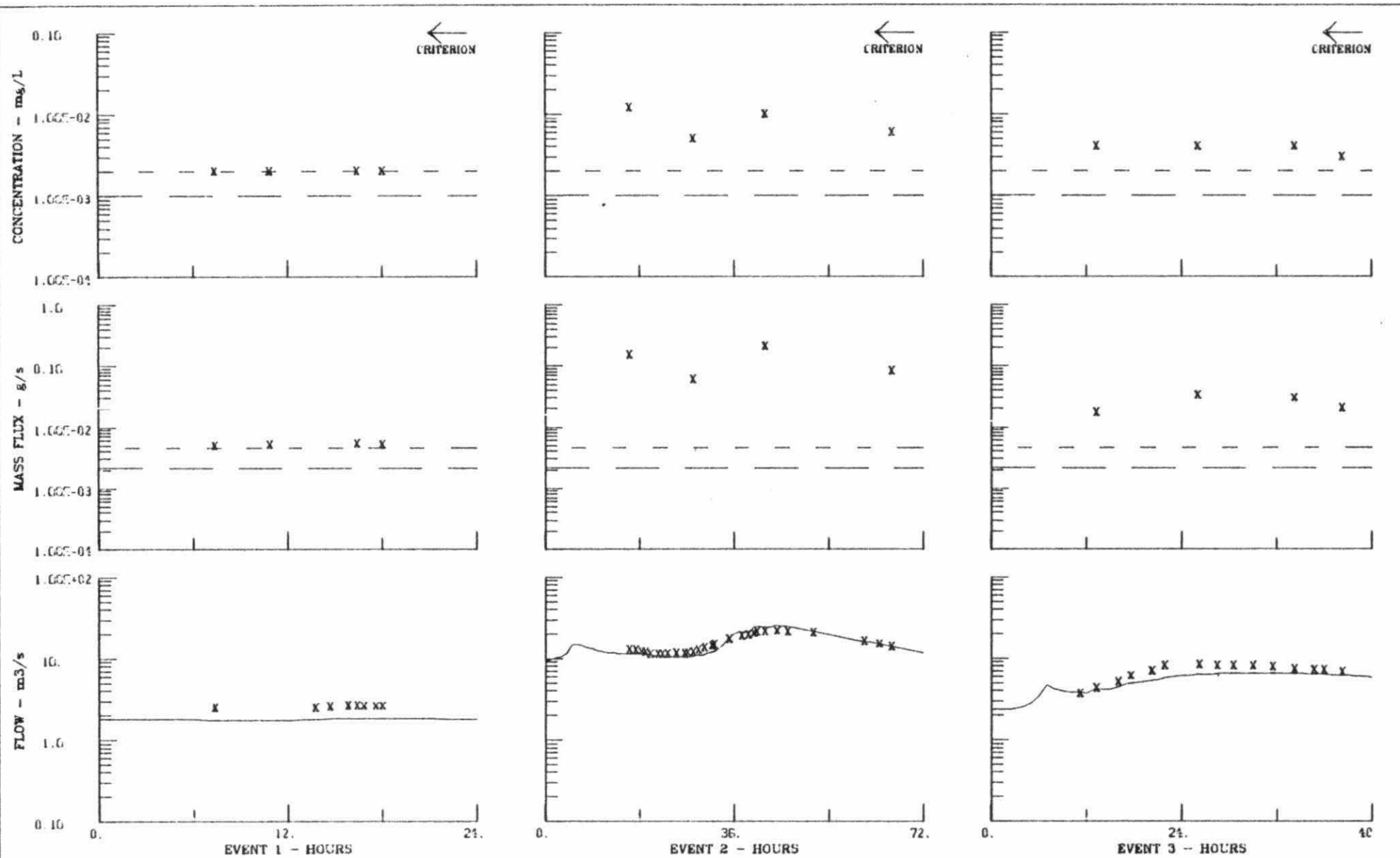
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - CHROMIUM



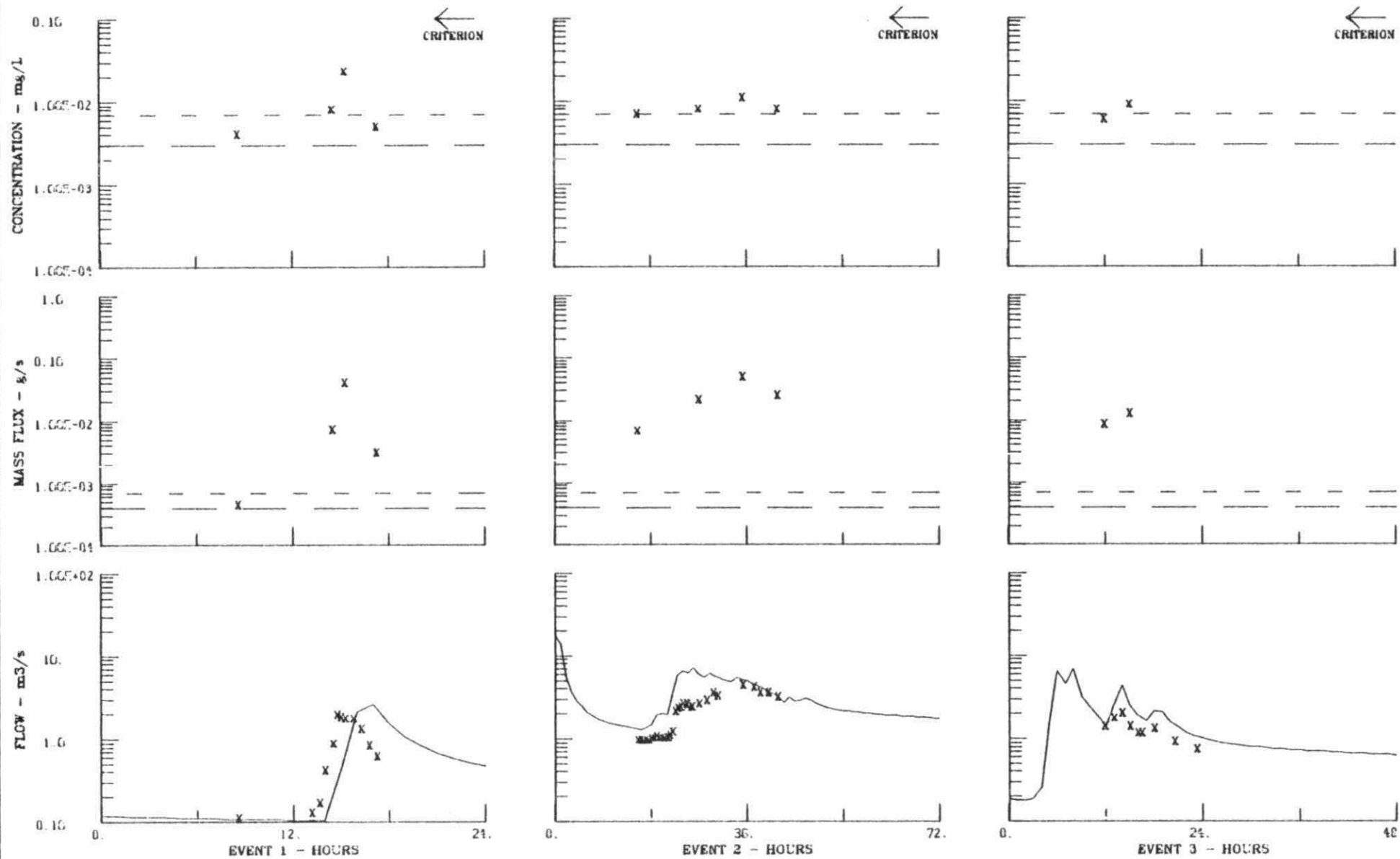
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - CHROMIUM



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - CHROMIUM

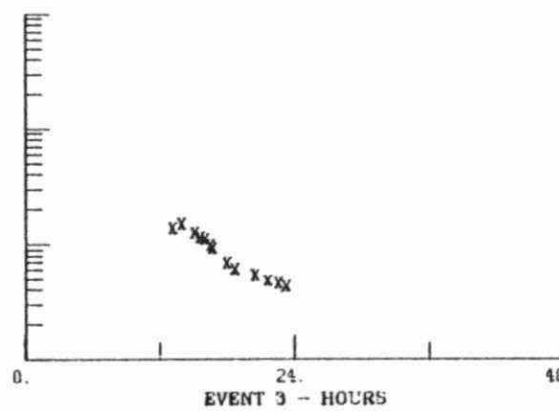
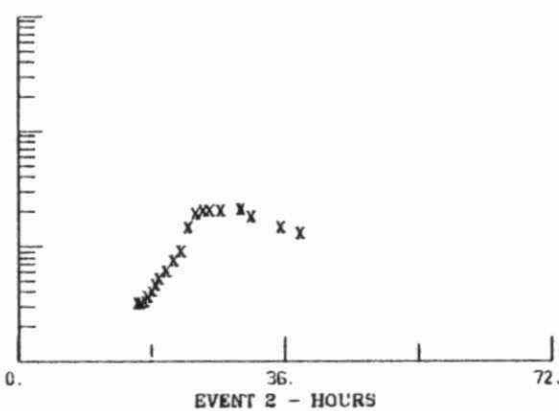
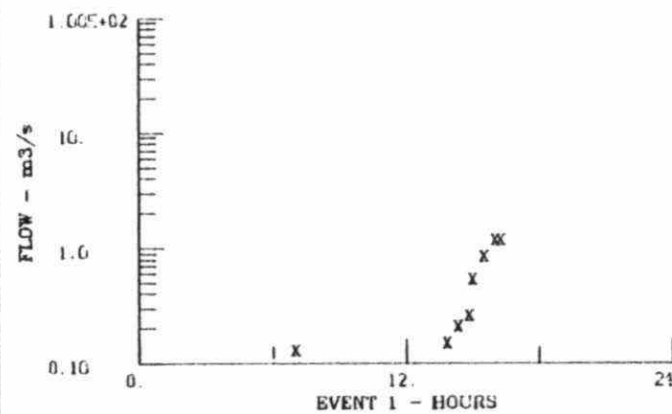
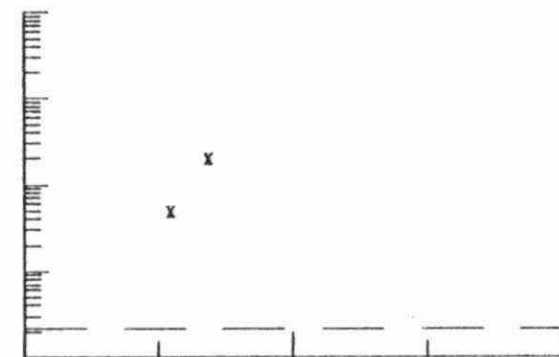
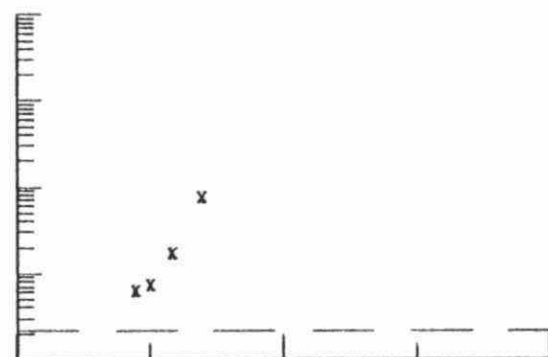
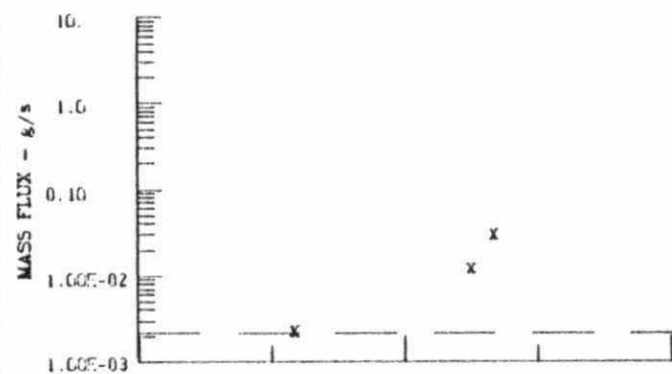
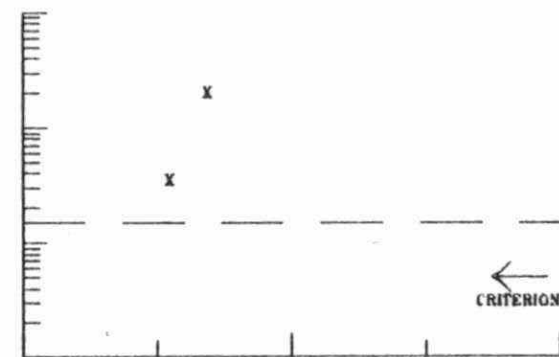
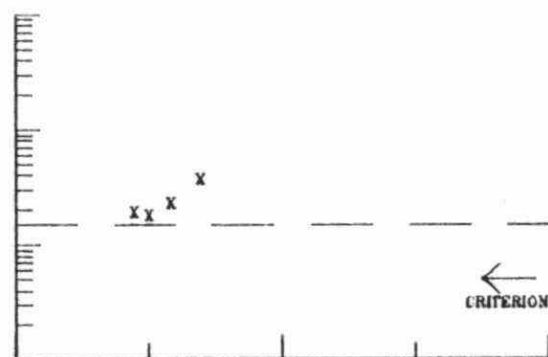
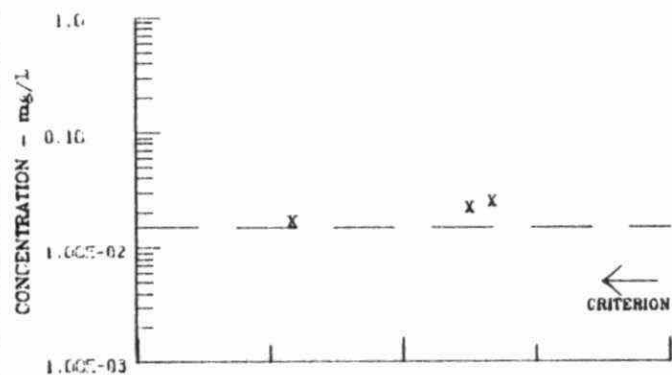


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - CHROMIUM

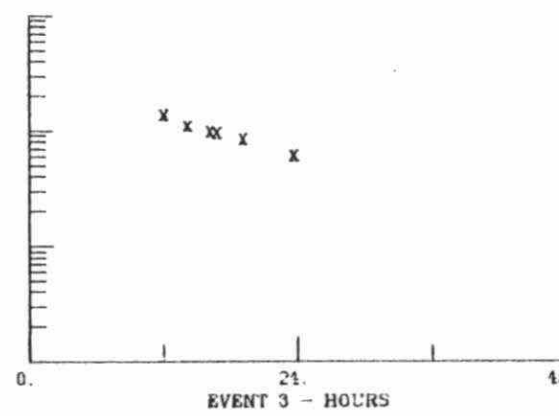
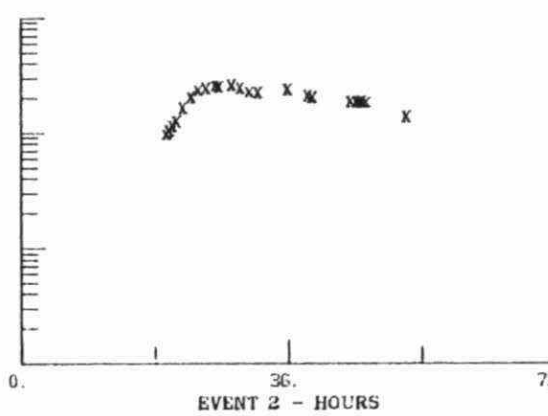
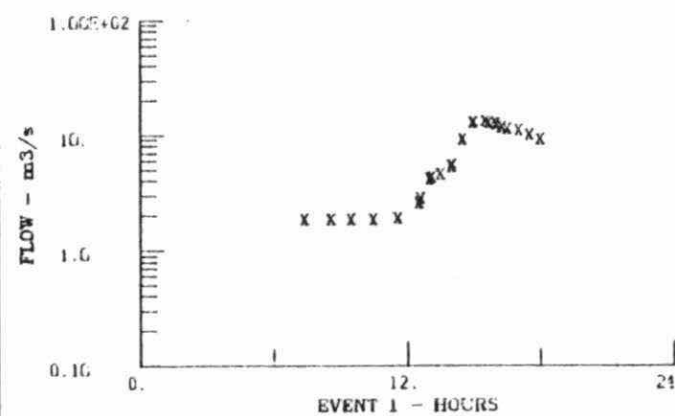
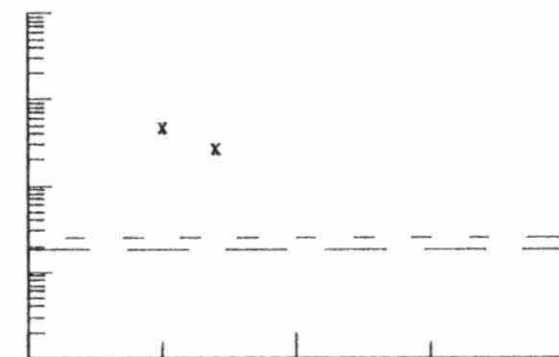
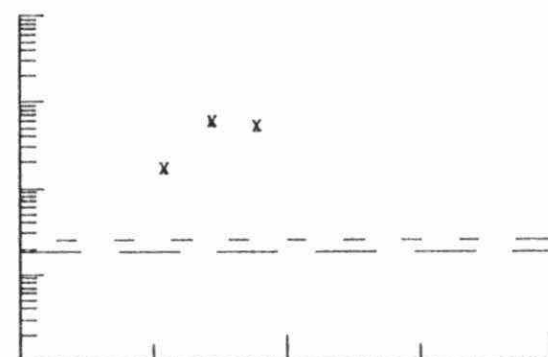
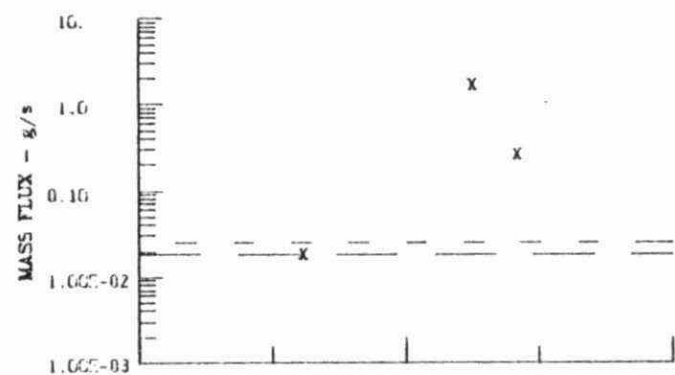
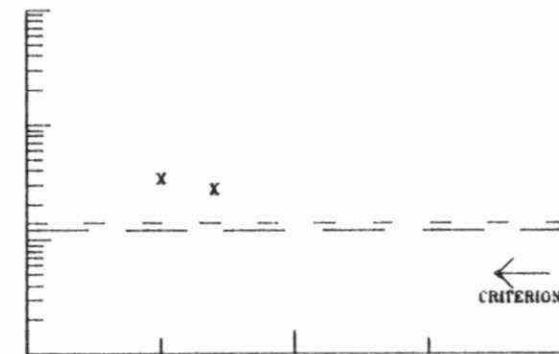
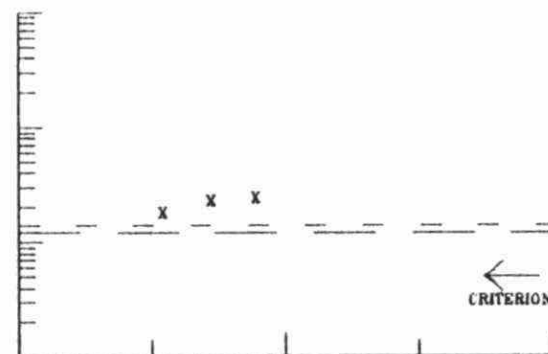
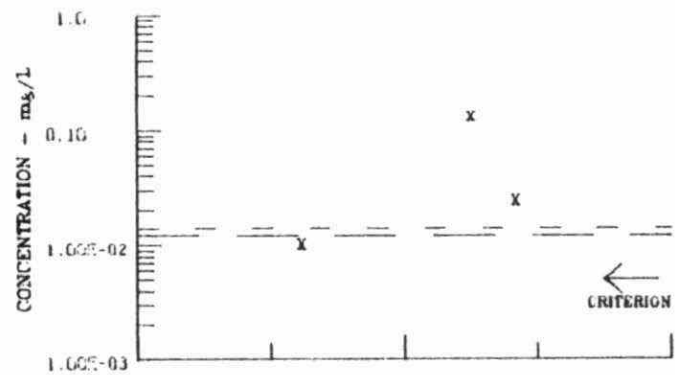


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - CHROMIUM

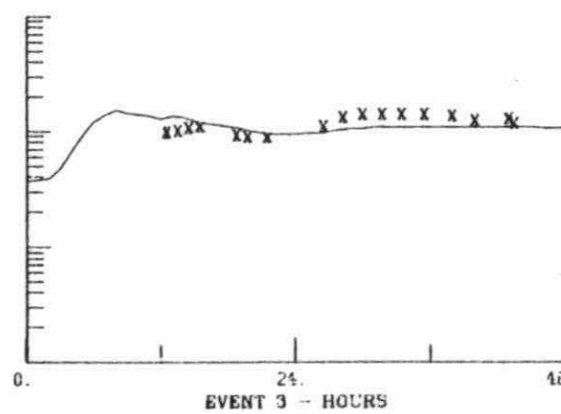
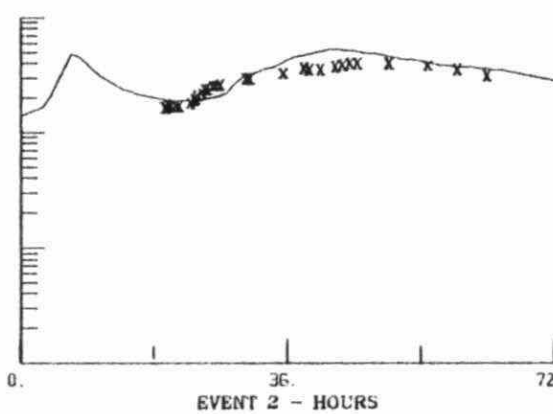
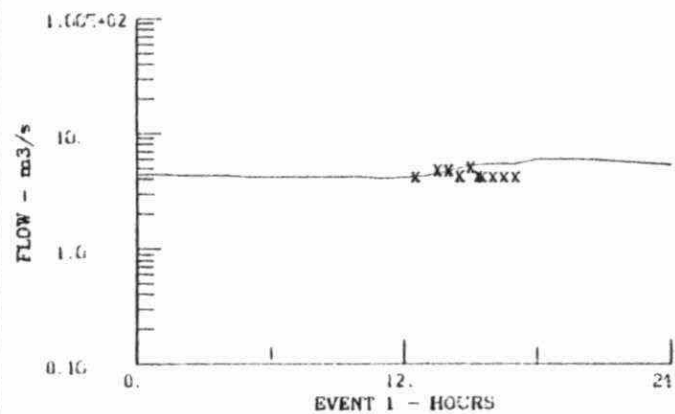
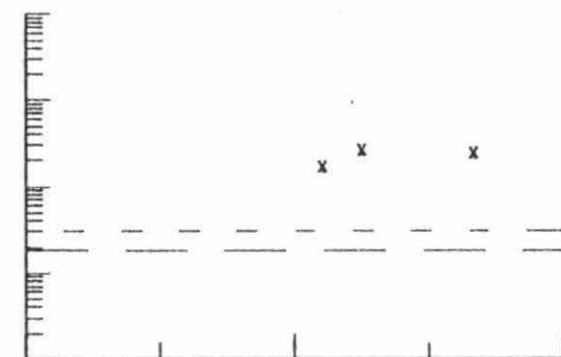
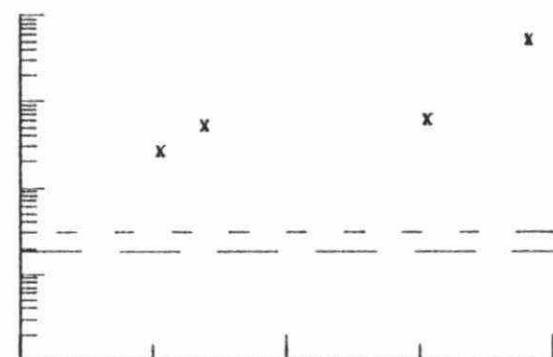
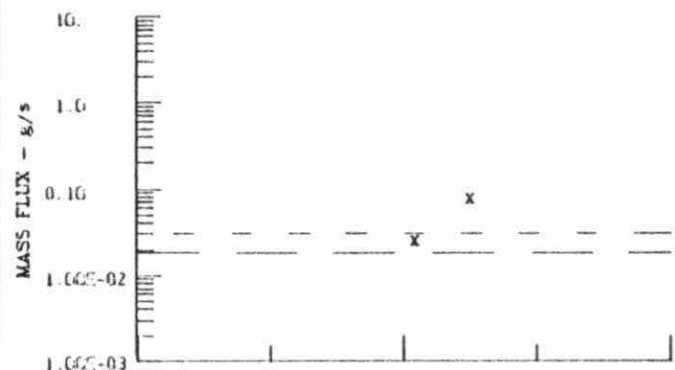
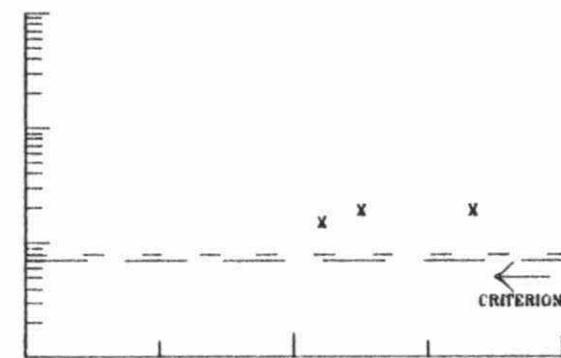
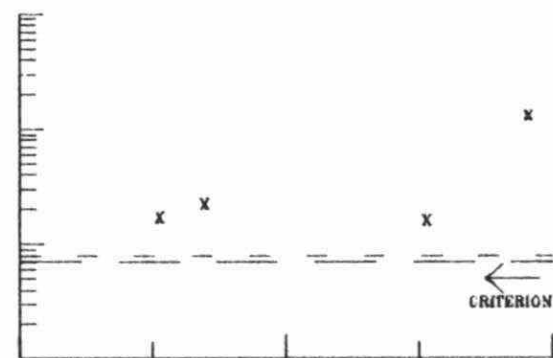
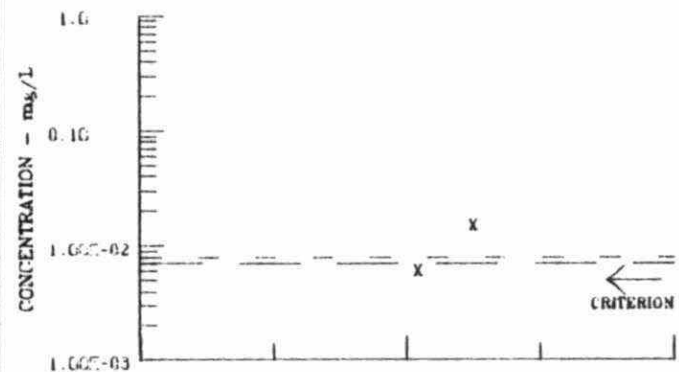
COPPER



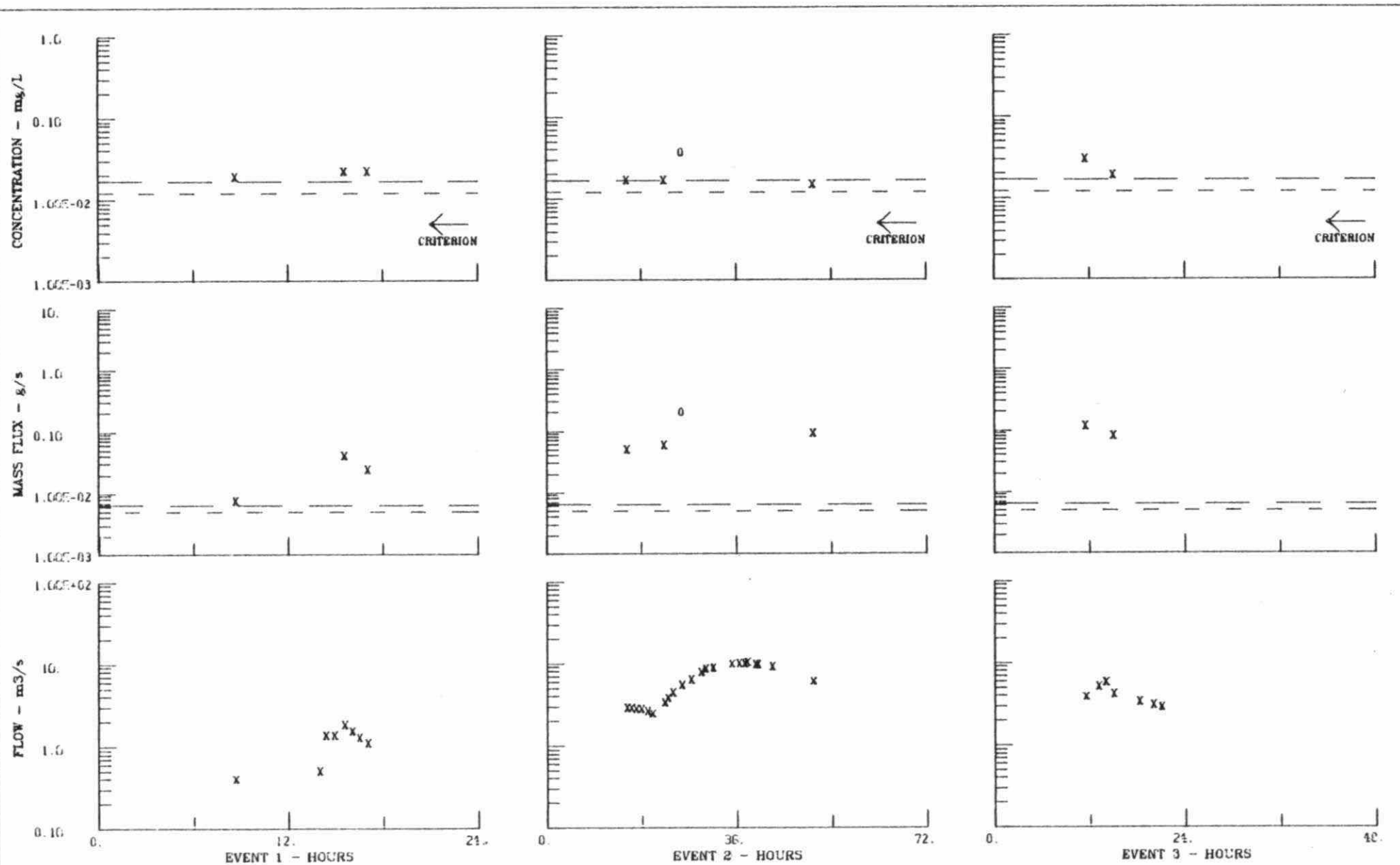
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - COPPER



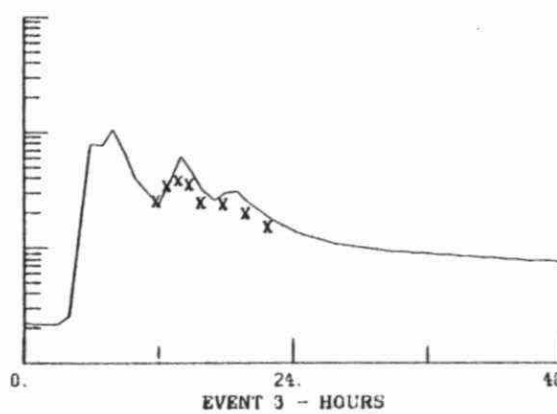
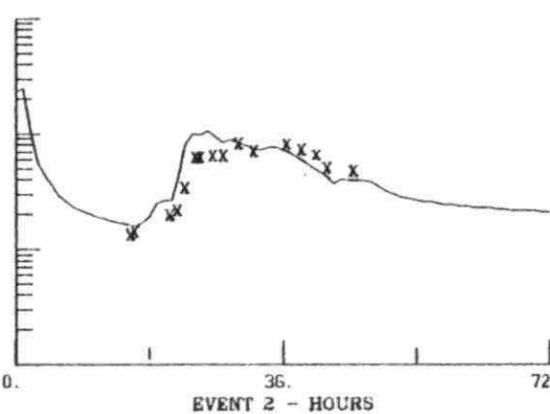
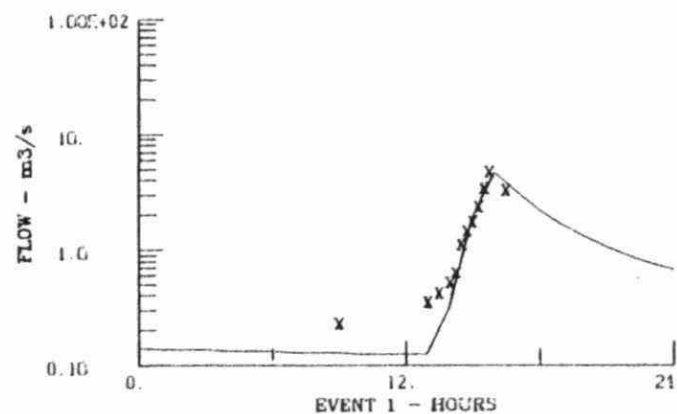
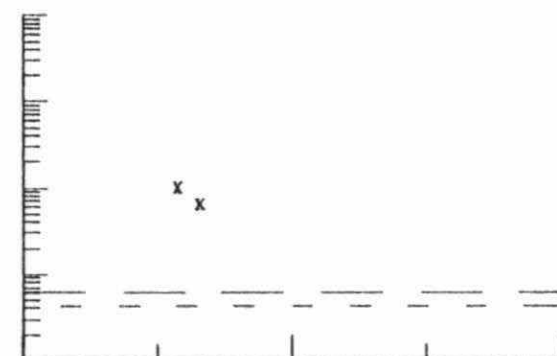
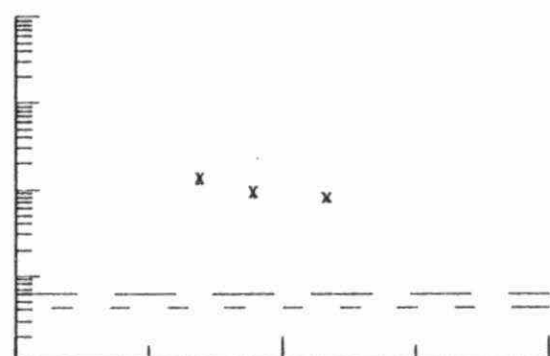
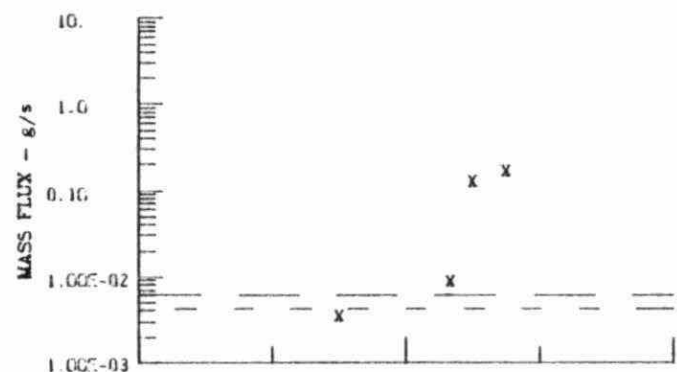
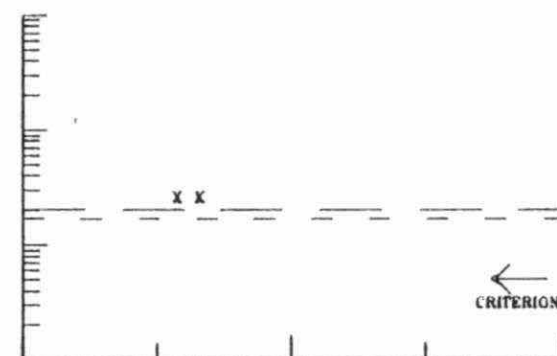
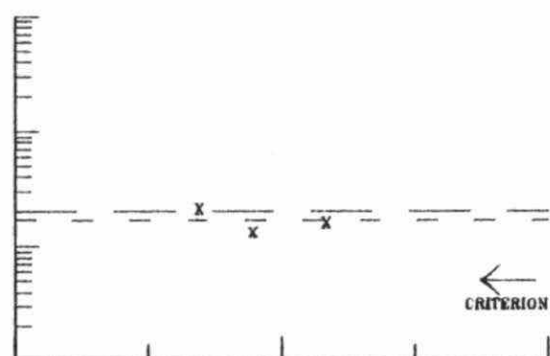
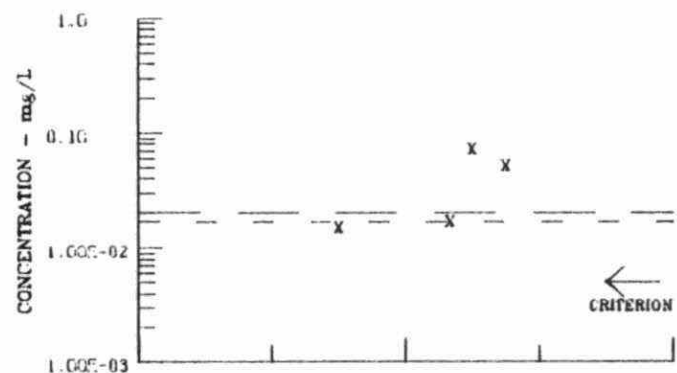
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - COPPER



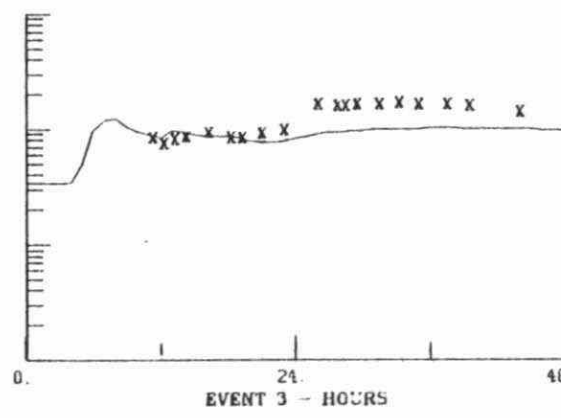
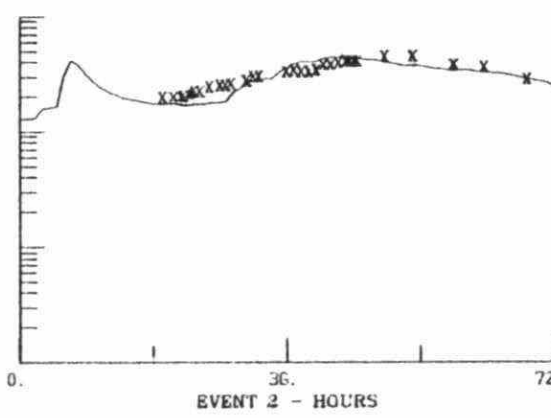
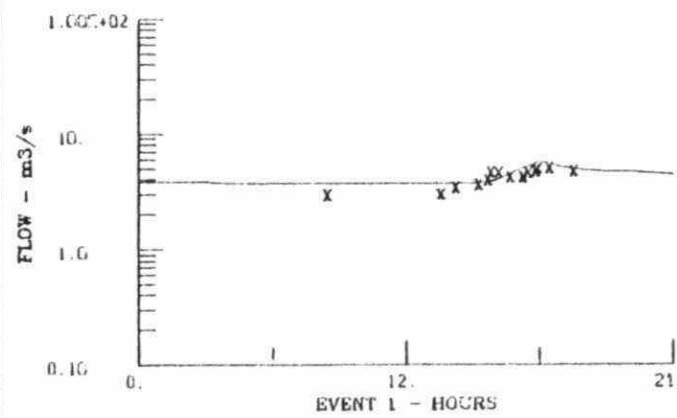
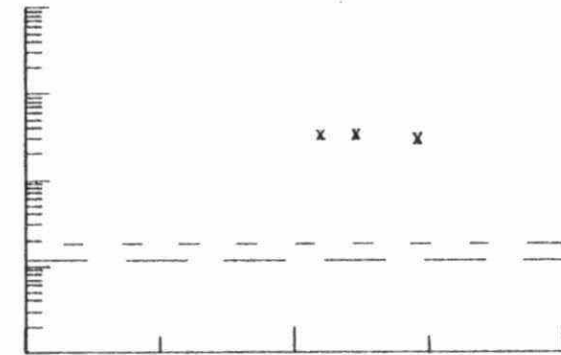
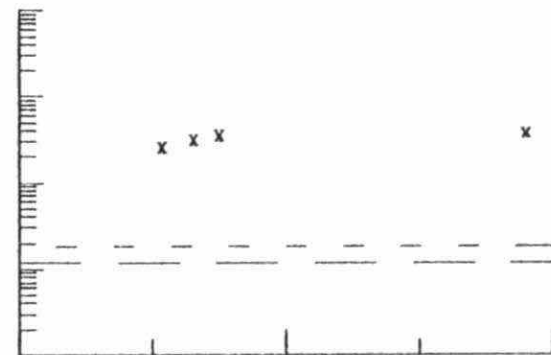
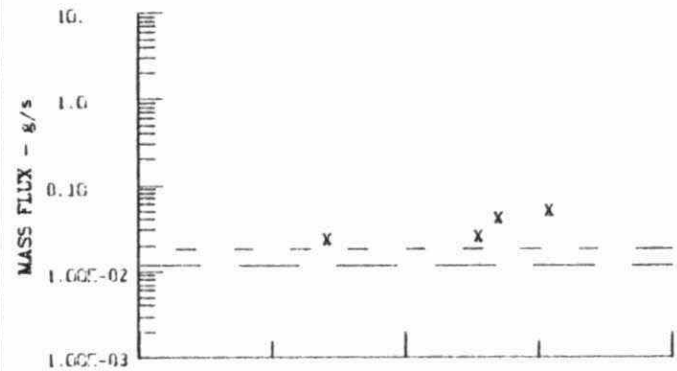
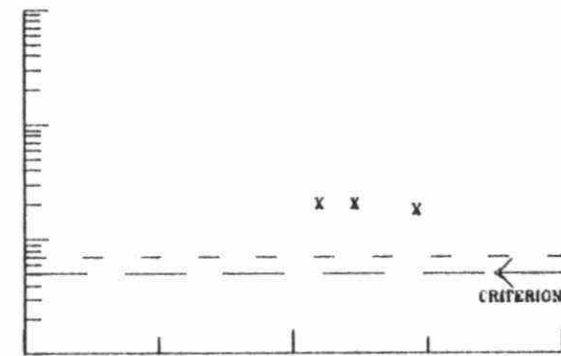
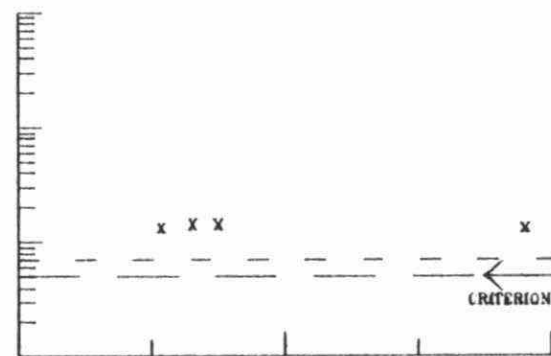
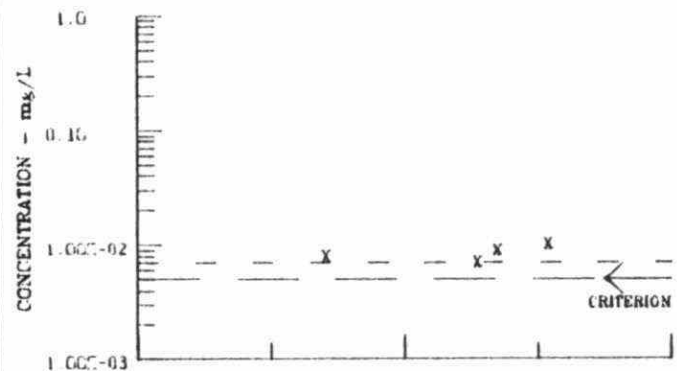
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - COPPER



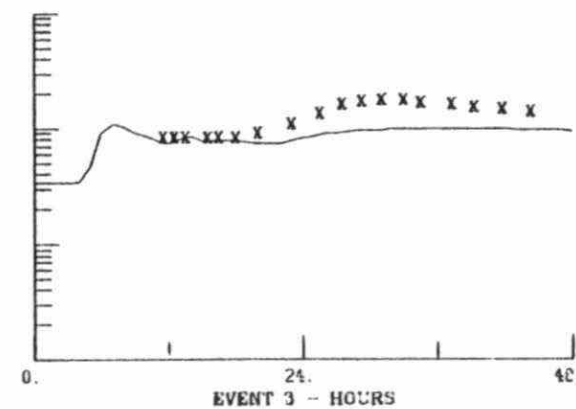
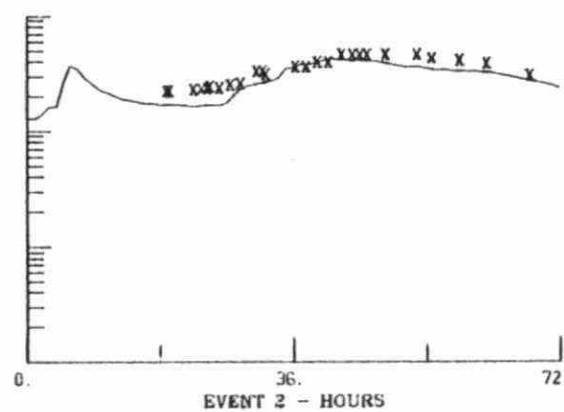
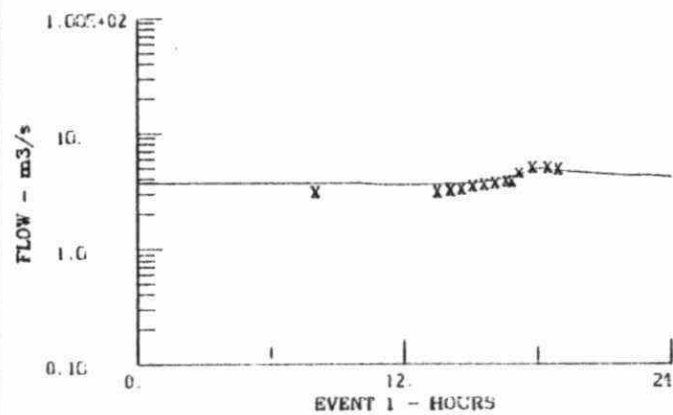
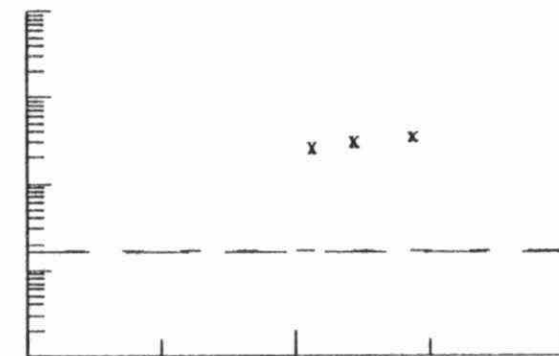
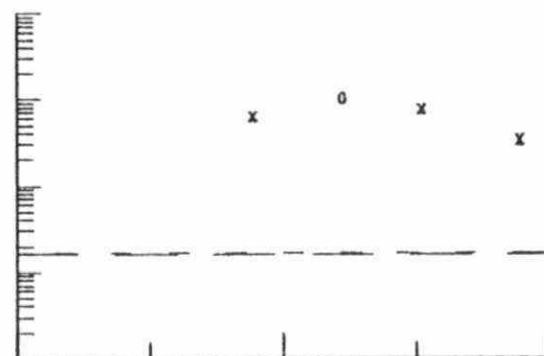
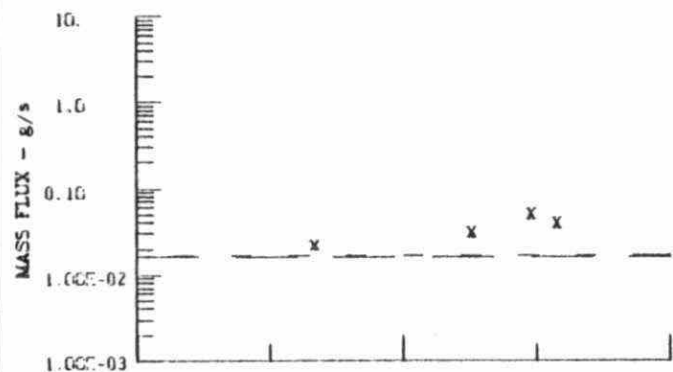
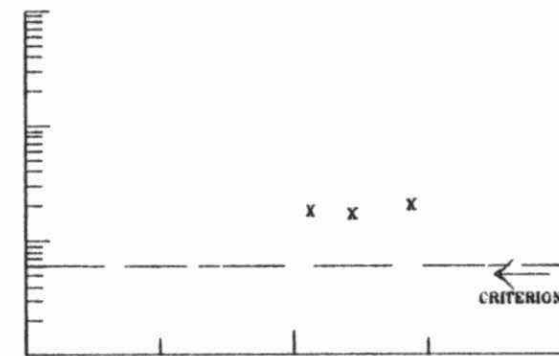
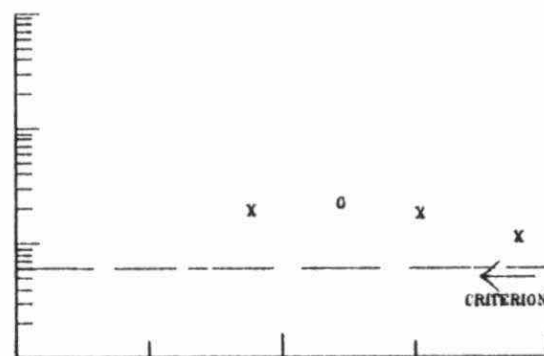
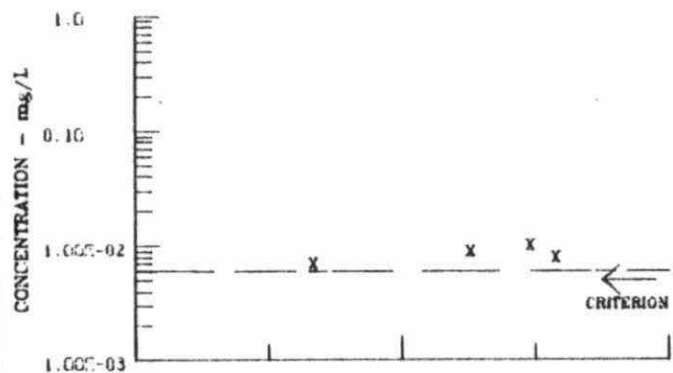
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - COPPER



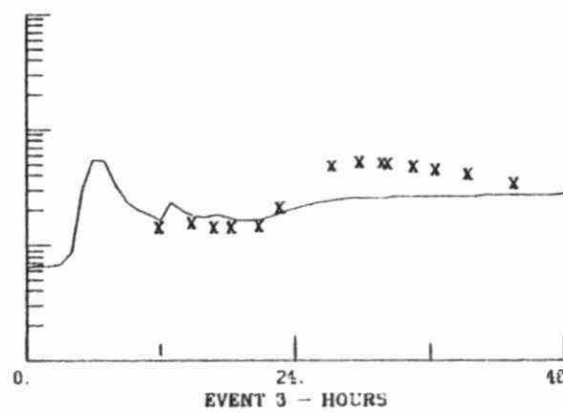
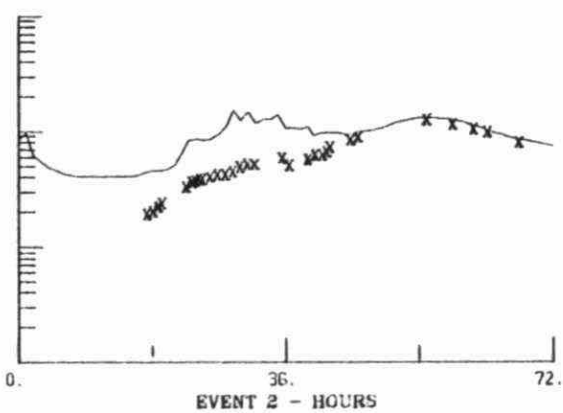
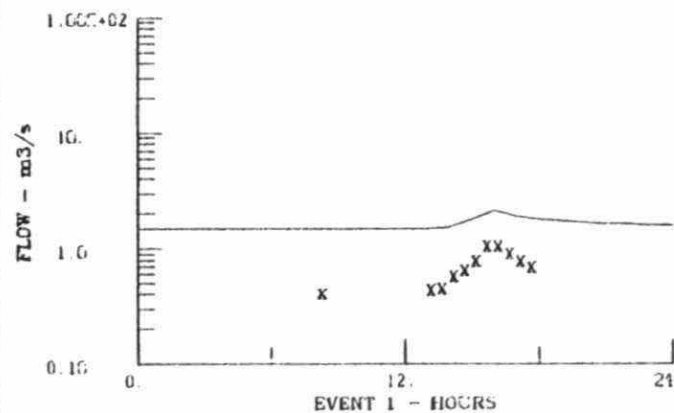
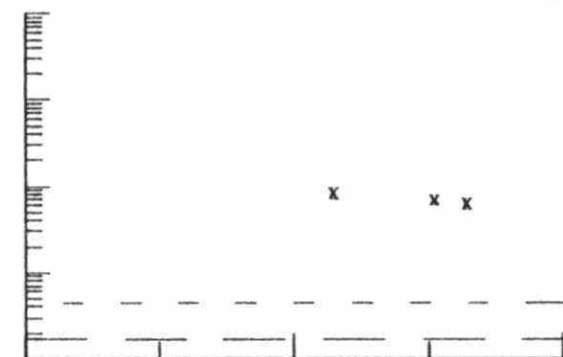
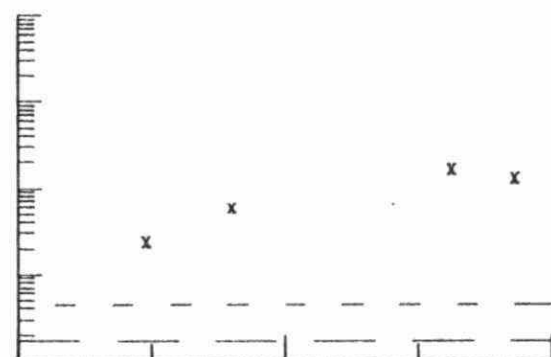
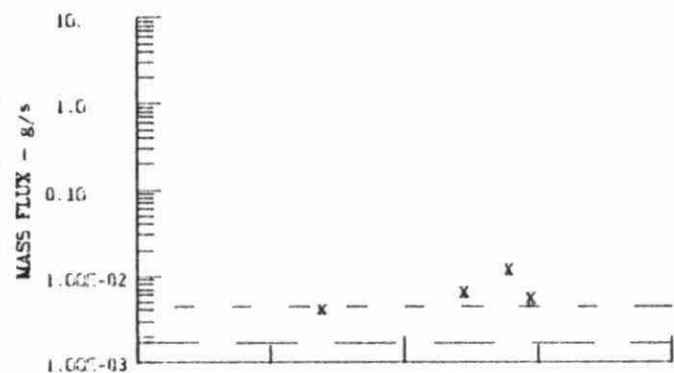
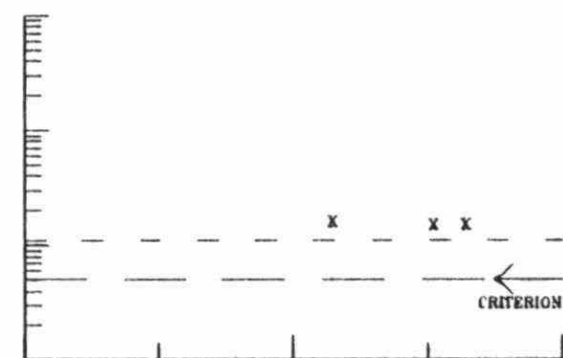
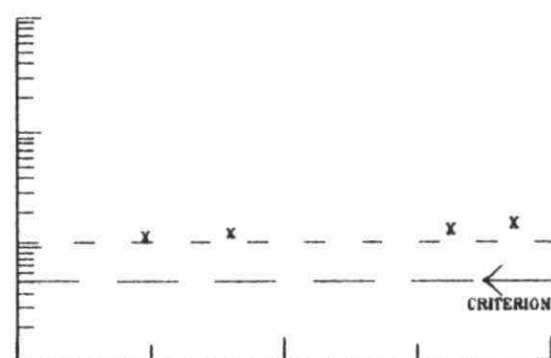
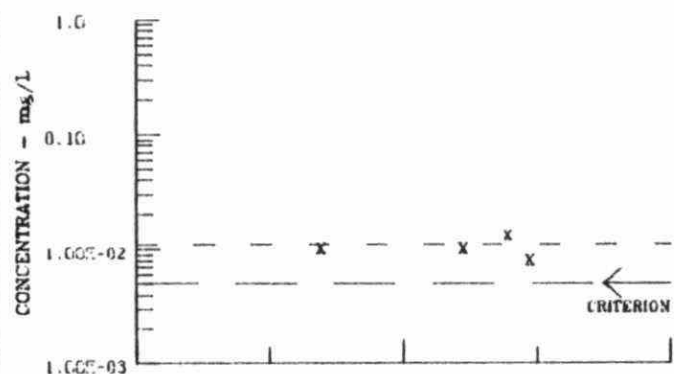
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - COPPER



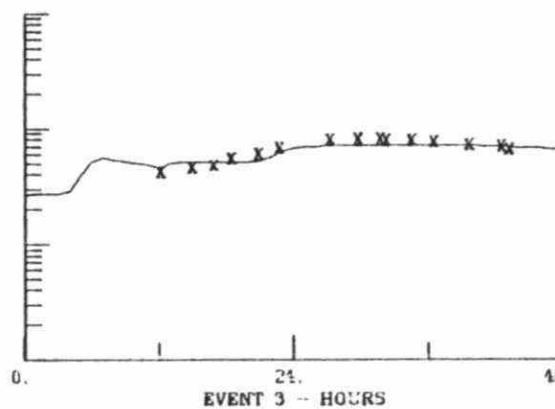
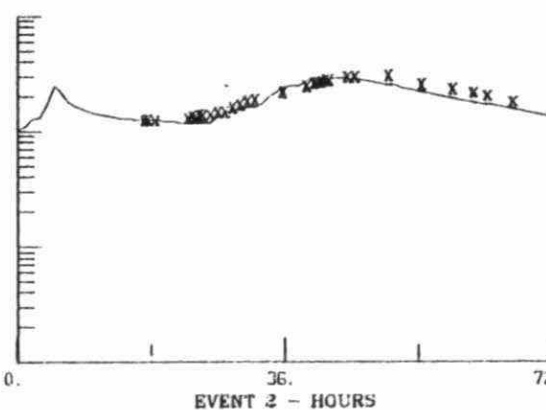
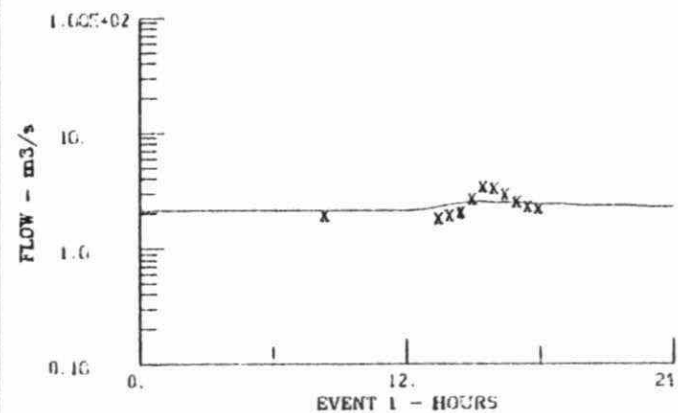
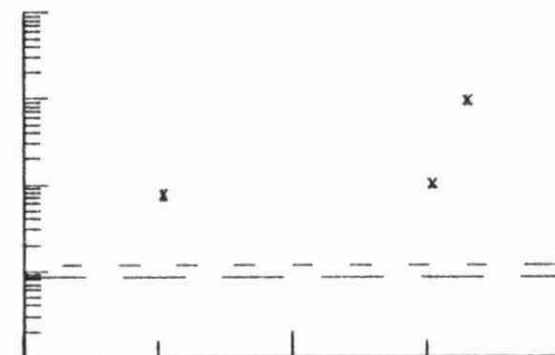
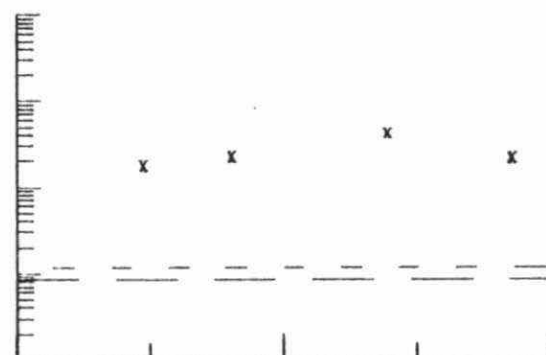
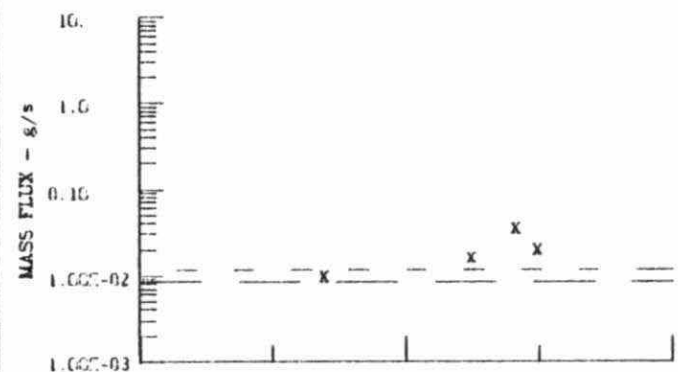
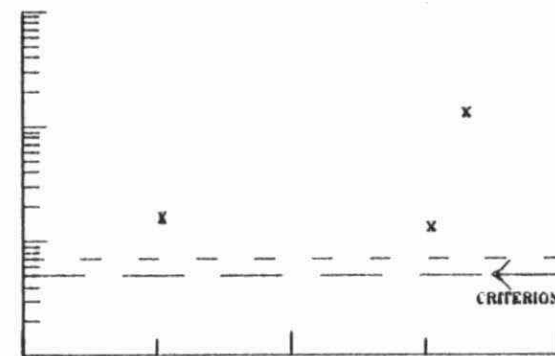
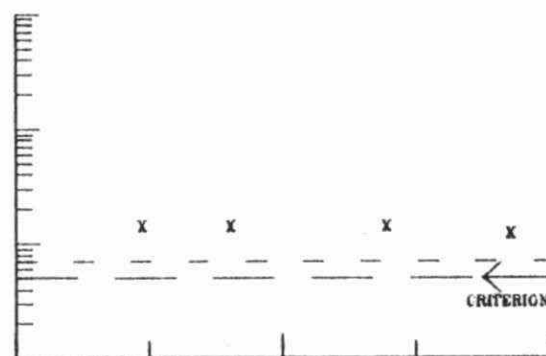
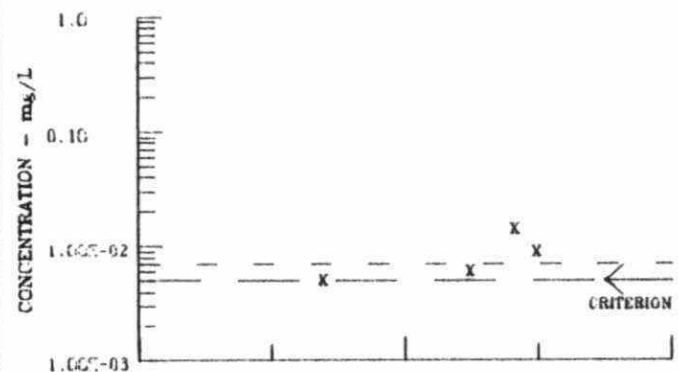
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - COPPER



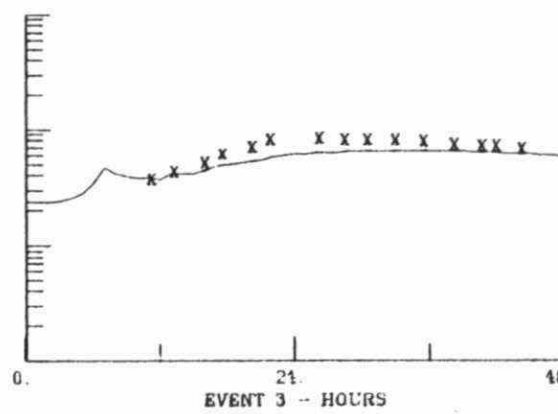
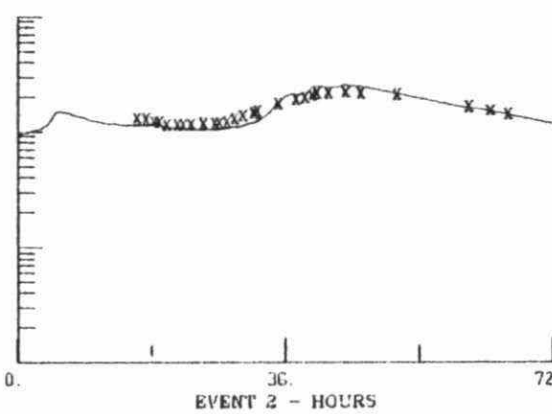
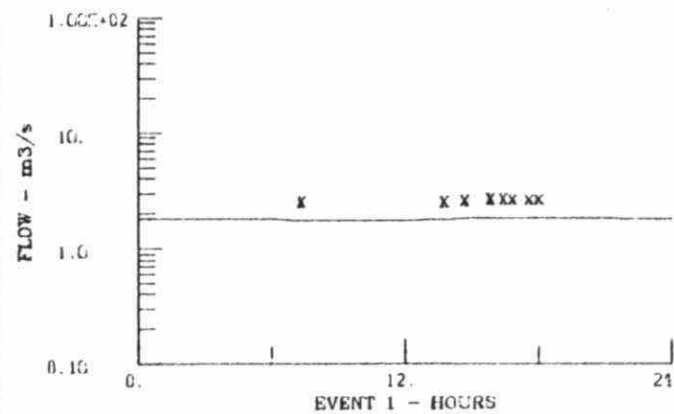
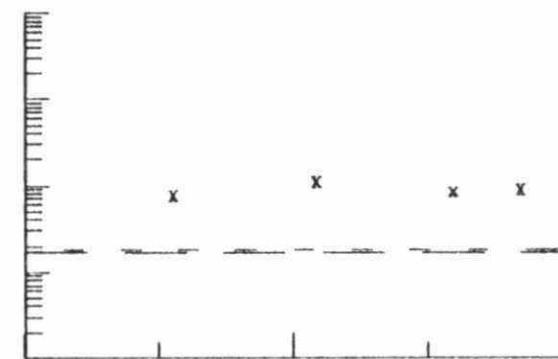
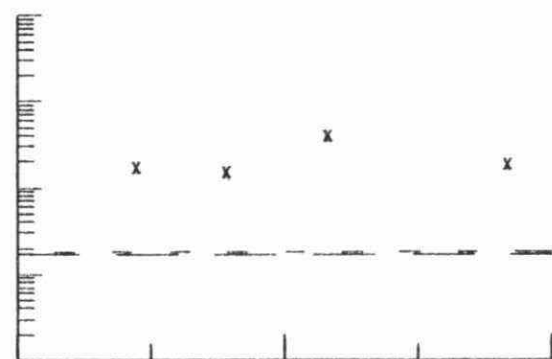
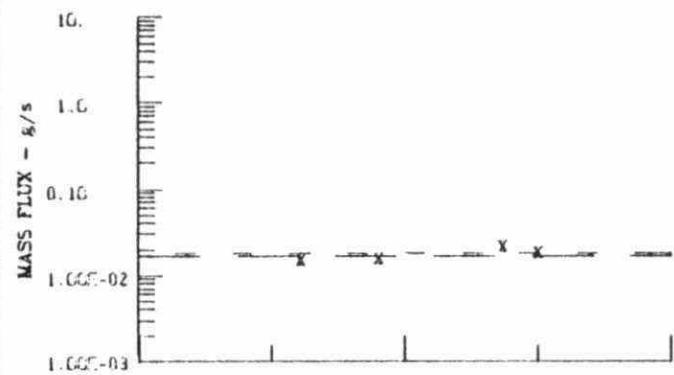
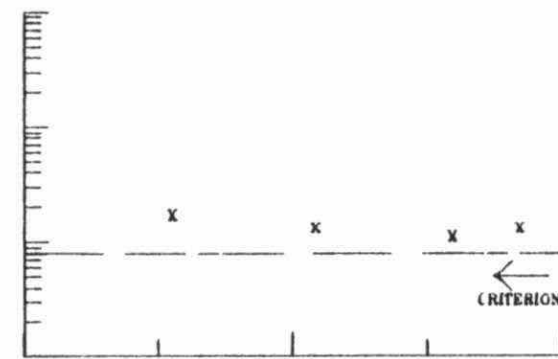
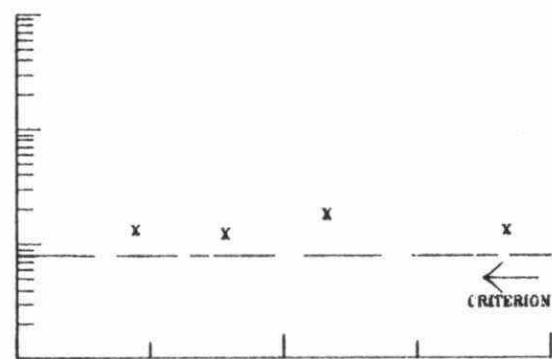
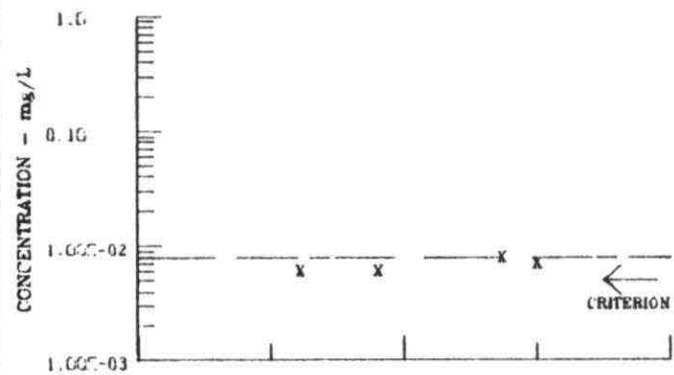
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - COPPER



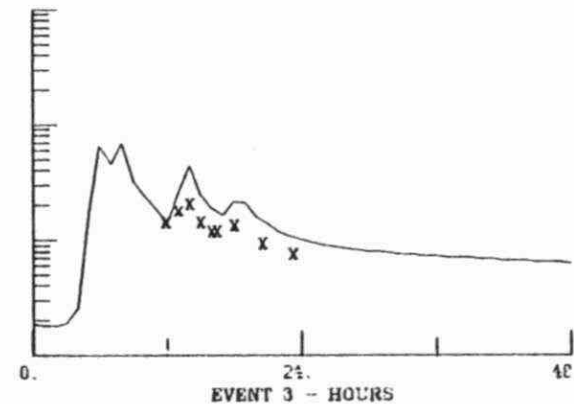
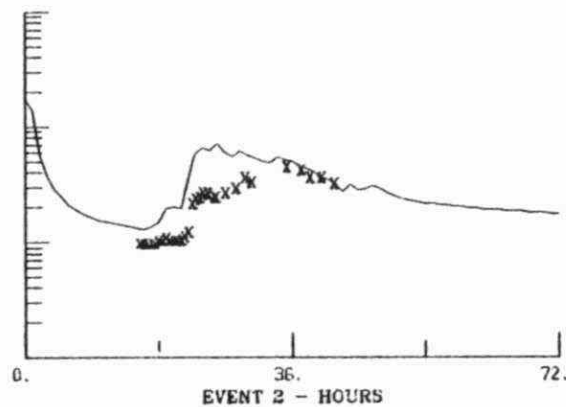
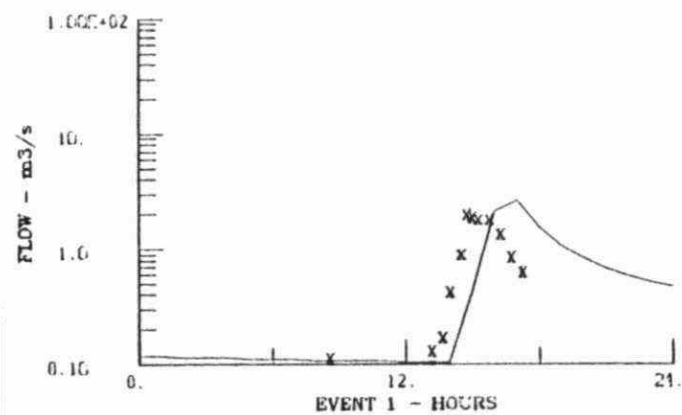
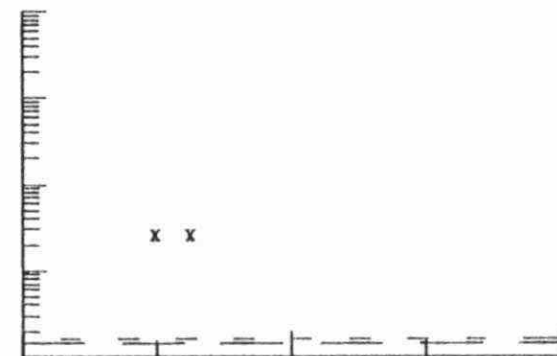
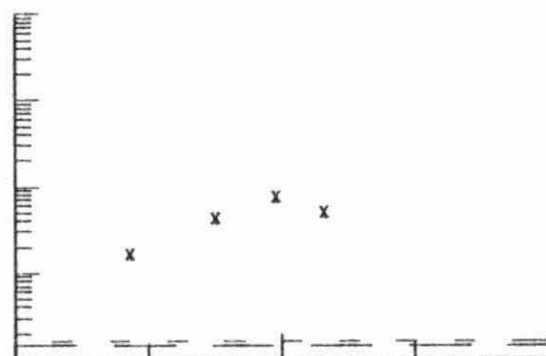
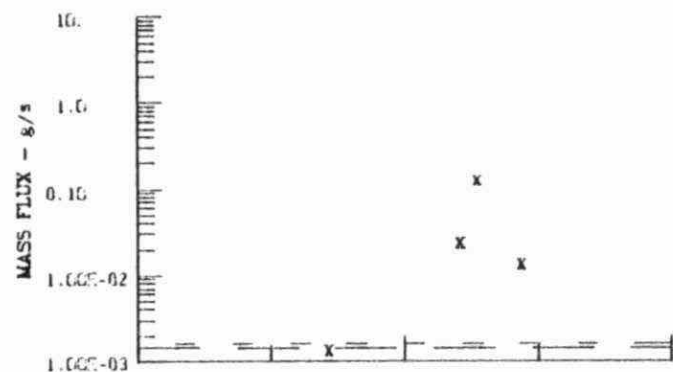
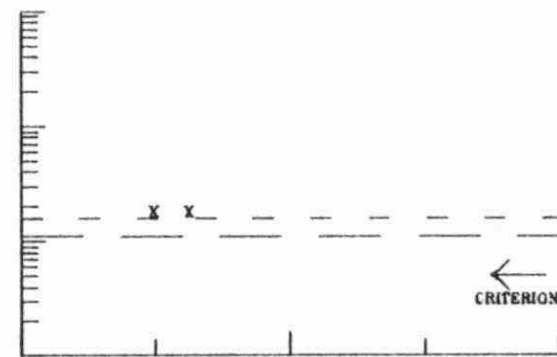
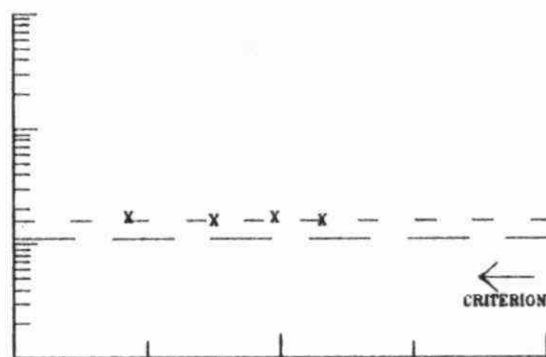
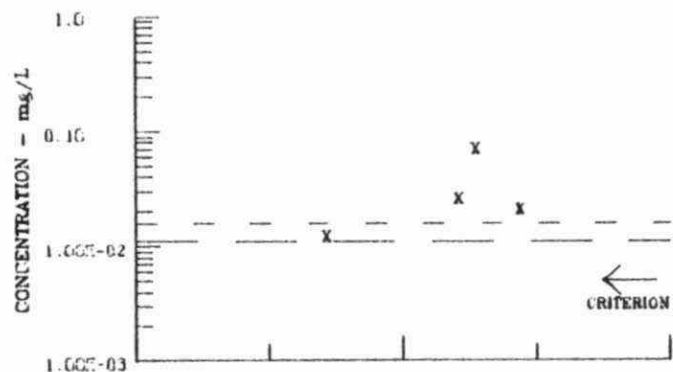
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - COPPER



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - COPPER

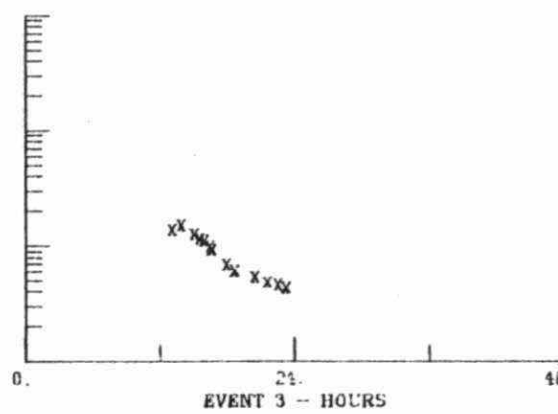
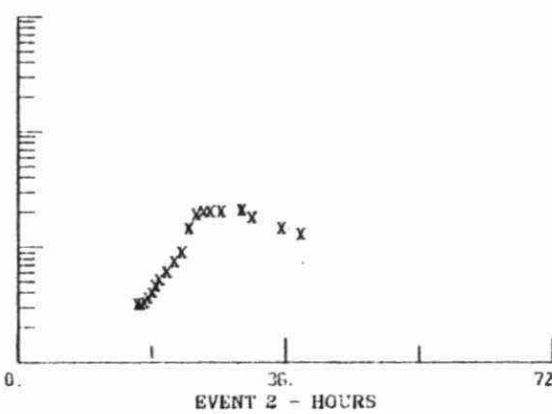
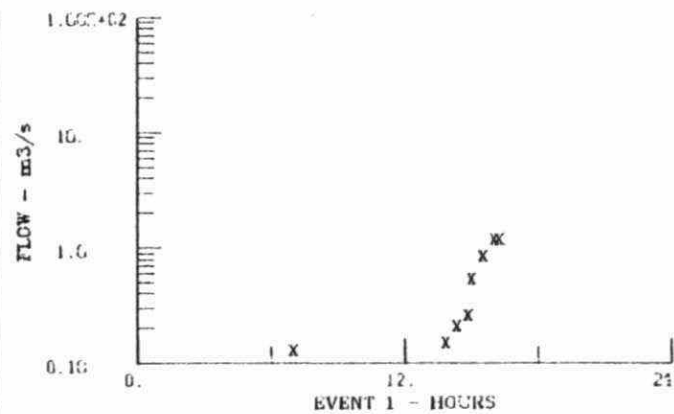
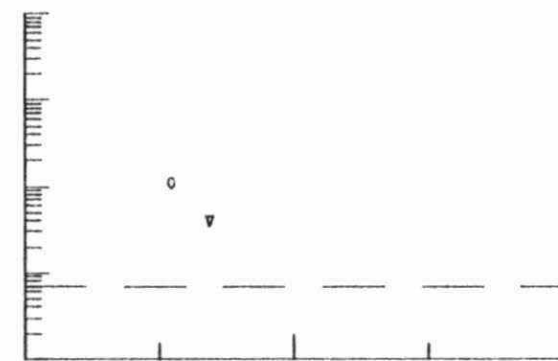
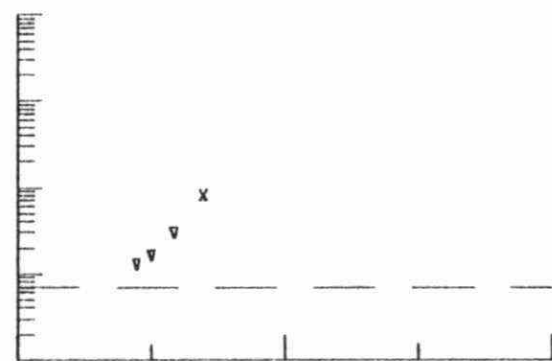
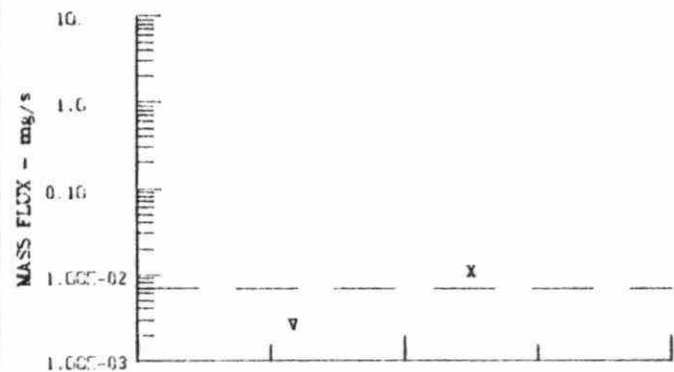
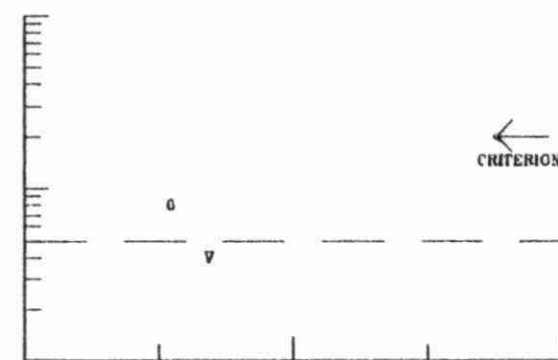
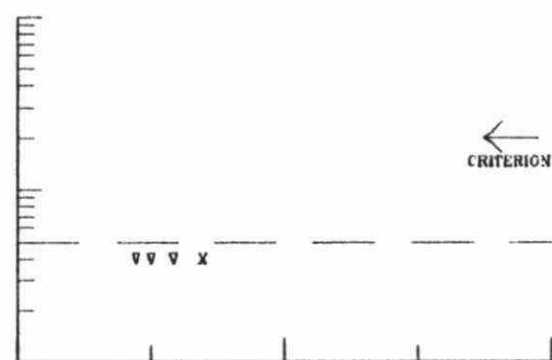
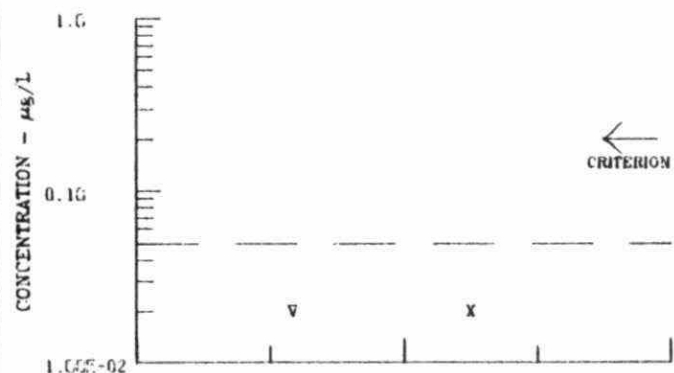


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - COPPER

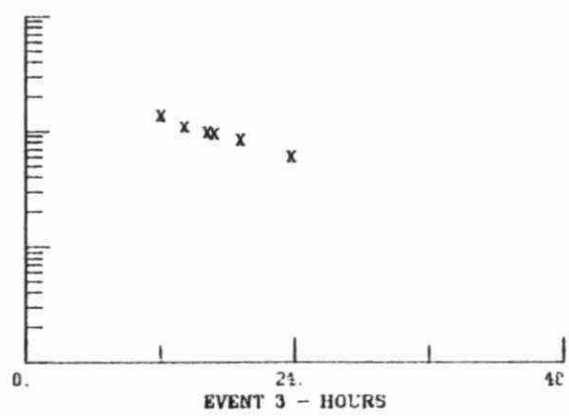
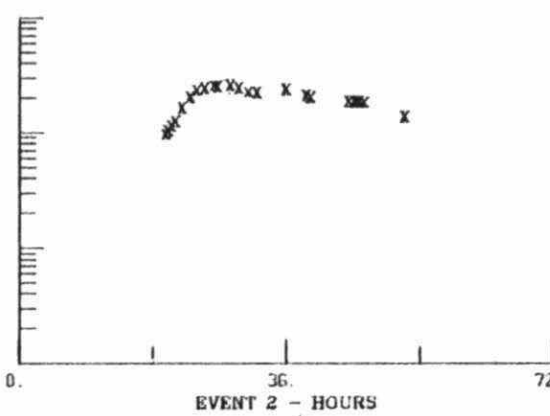
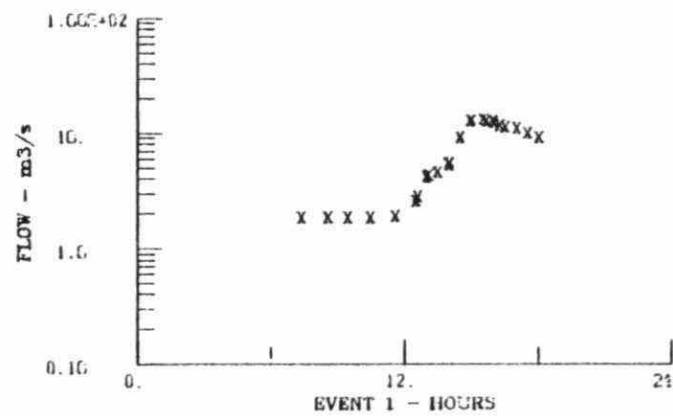
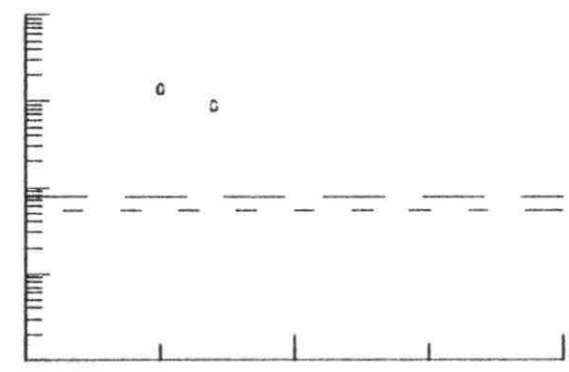
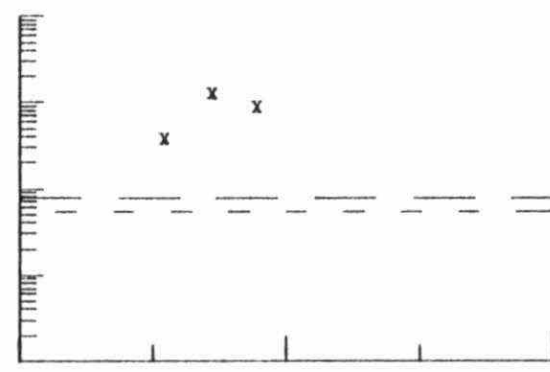
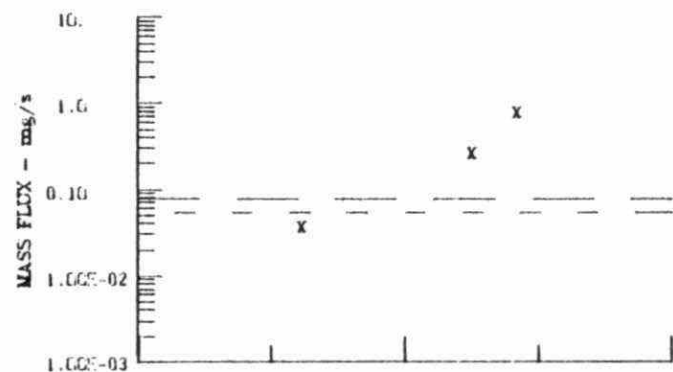
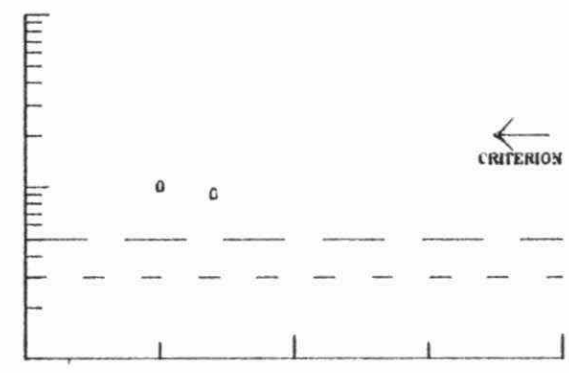
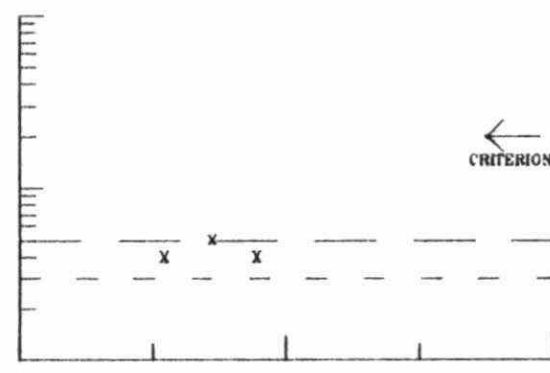
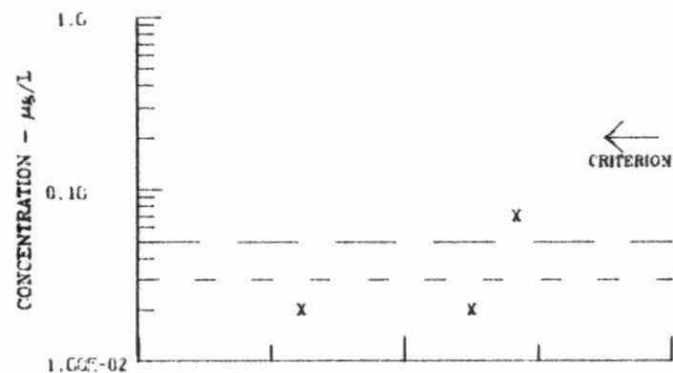


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - COPPER

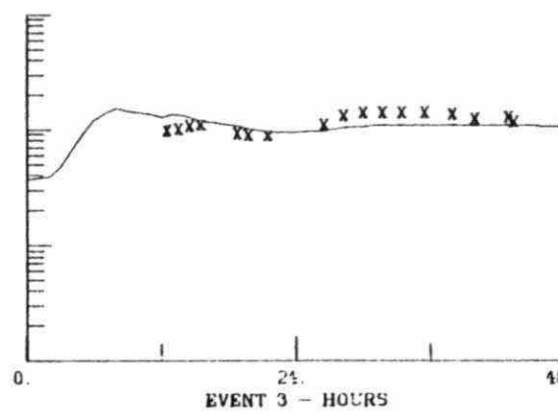
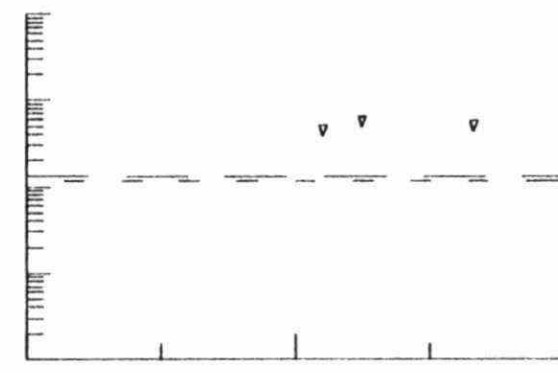
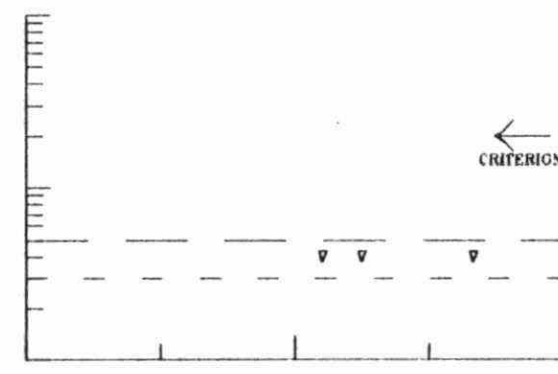
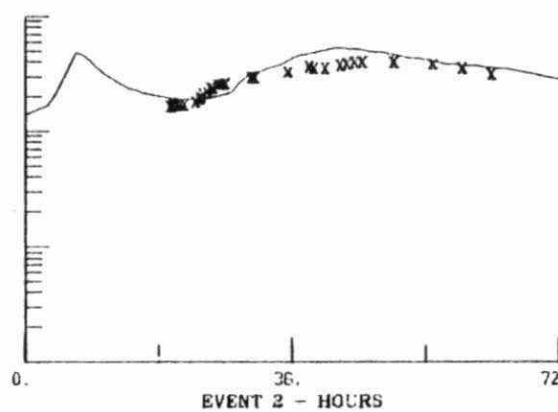
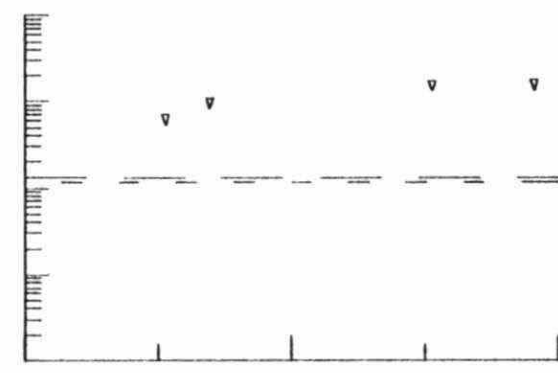
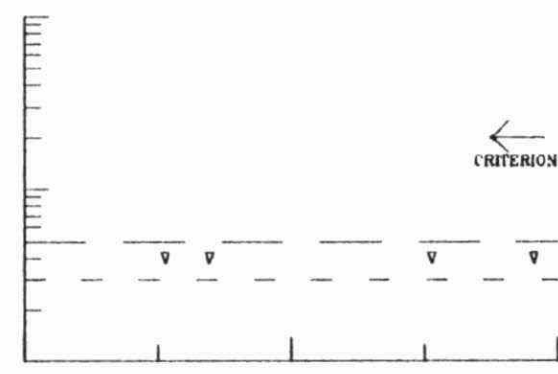
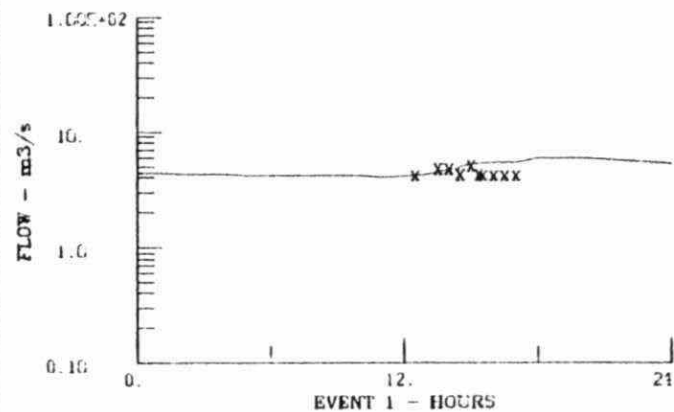
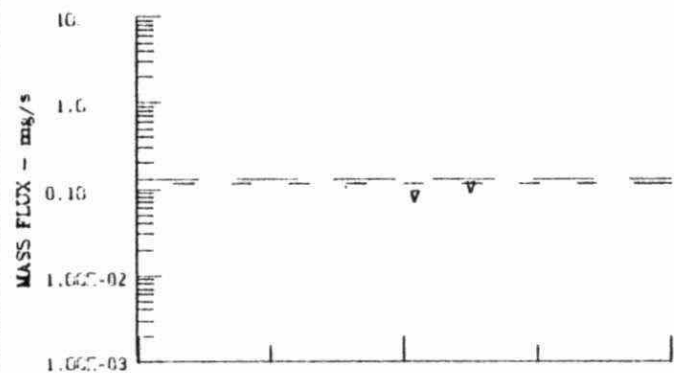
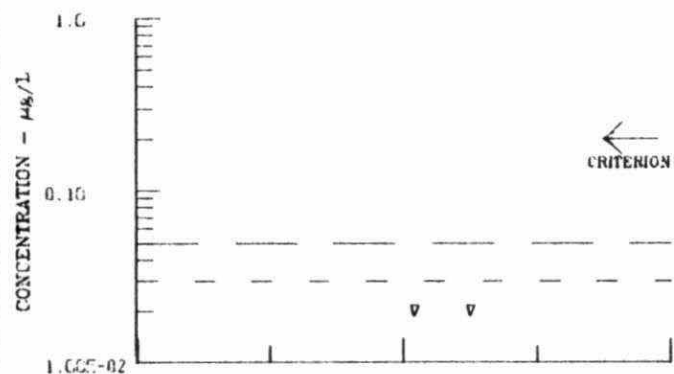
MERCURY



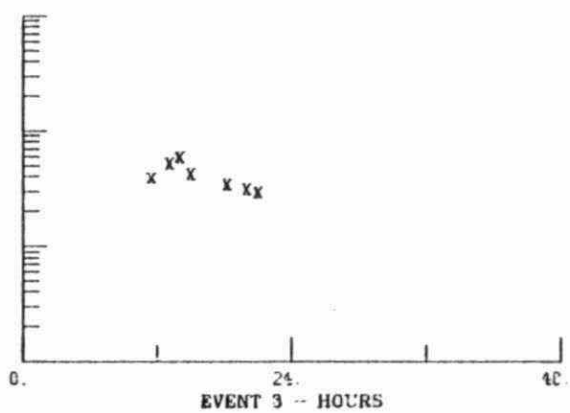
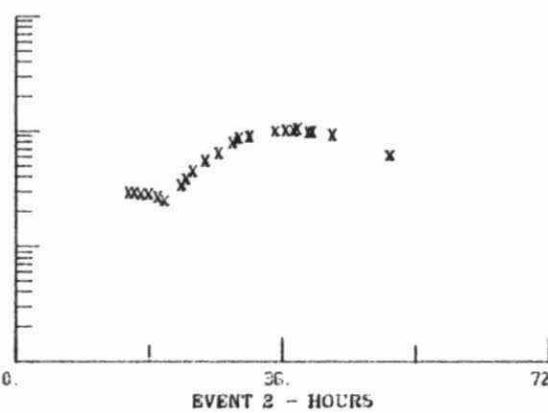
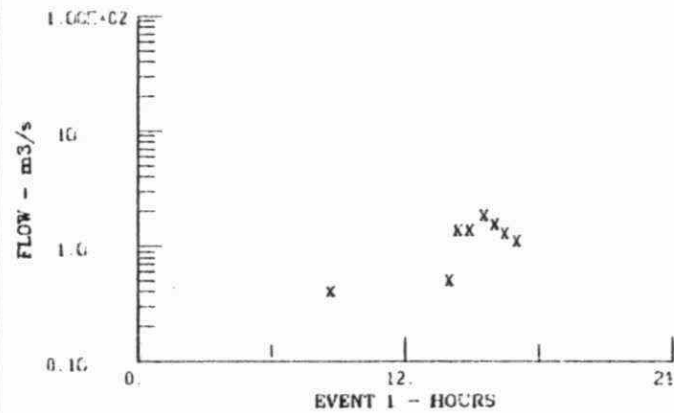
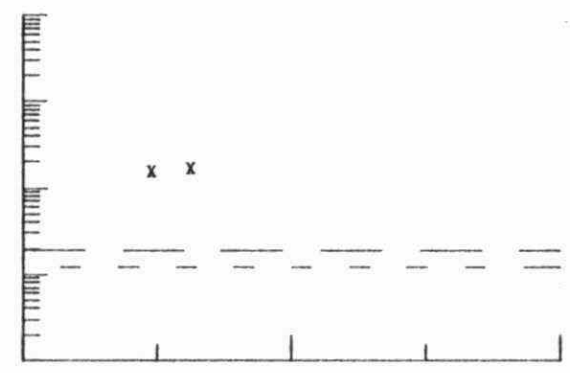
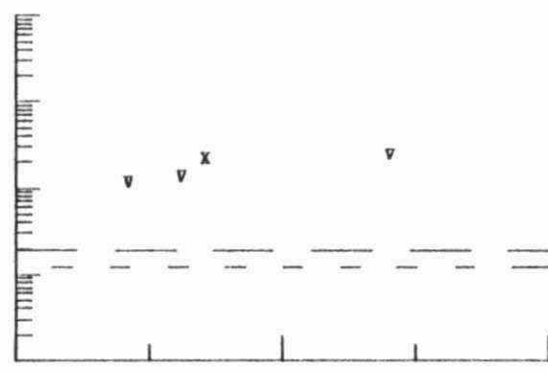
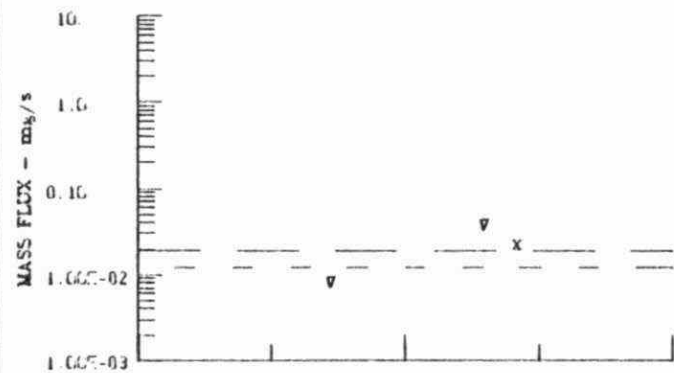
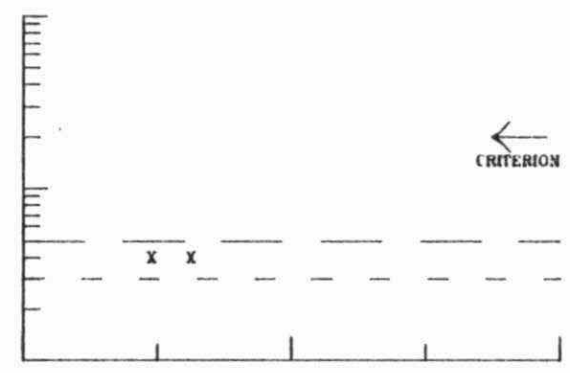
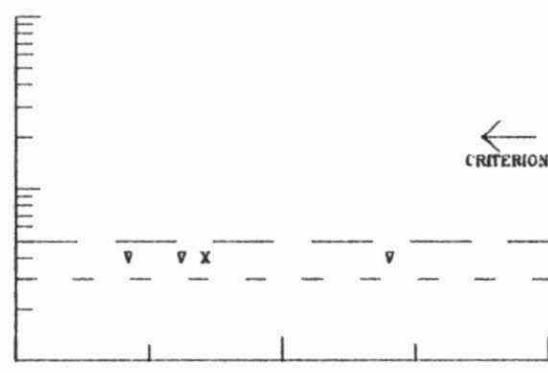
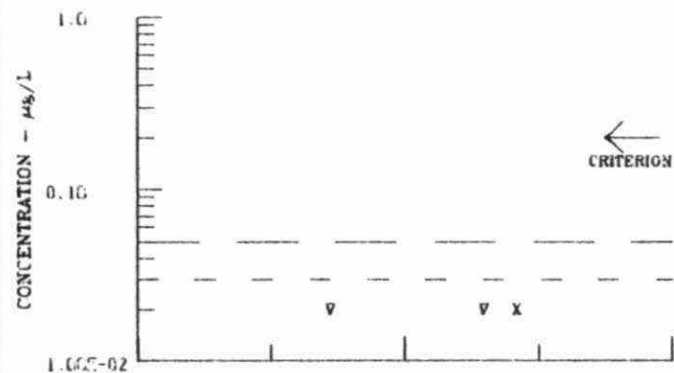
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - MERCURY



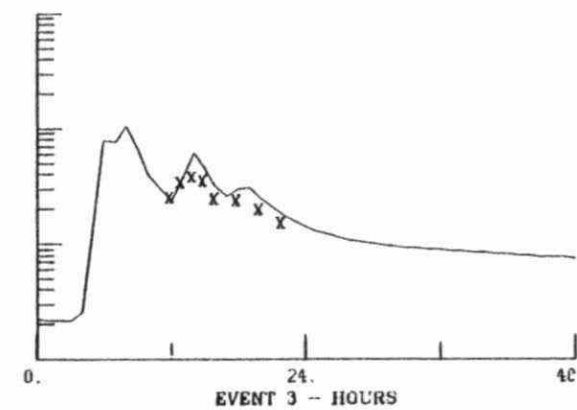
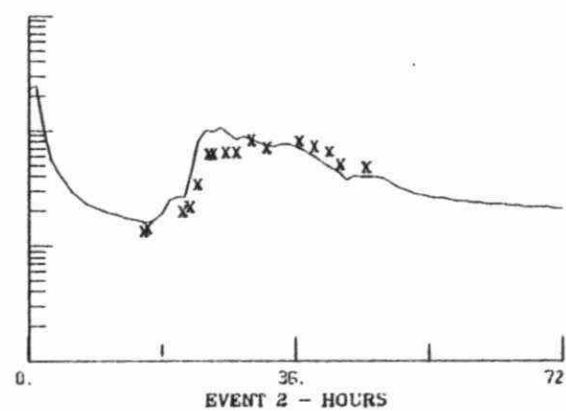
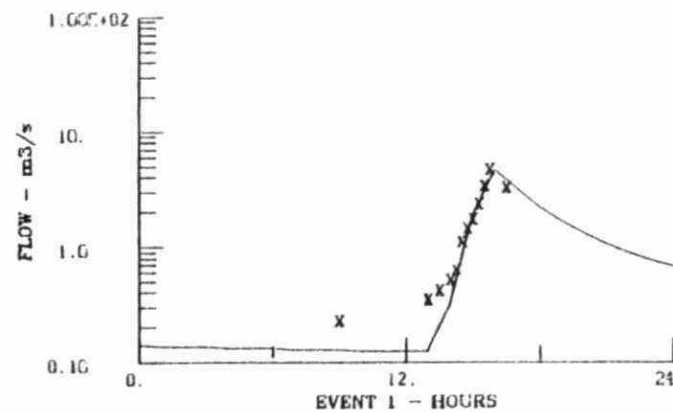
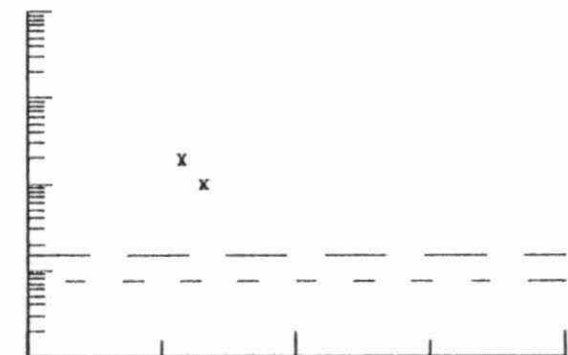
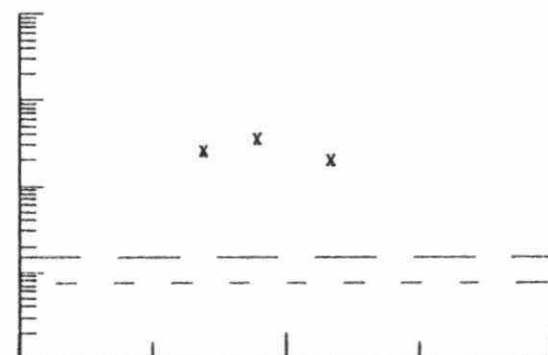
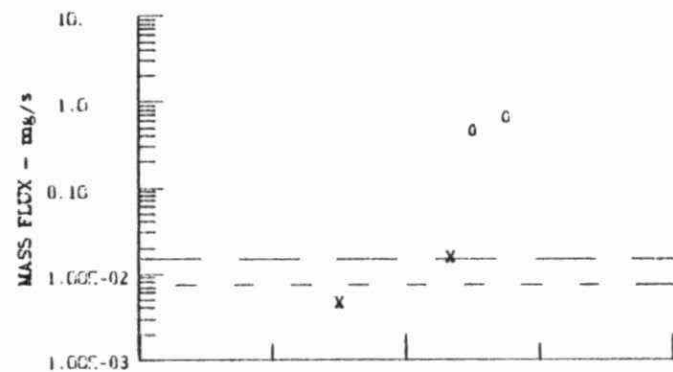
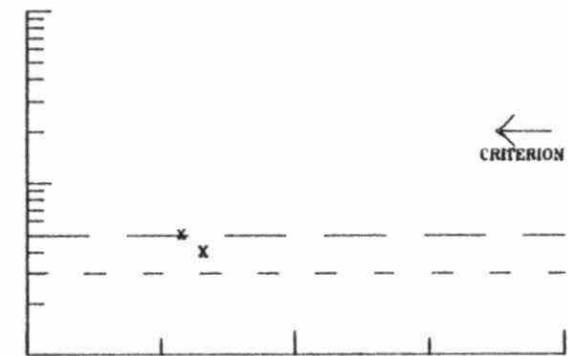
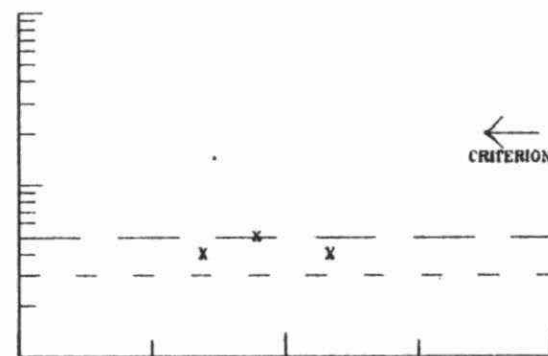
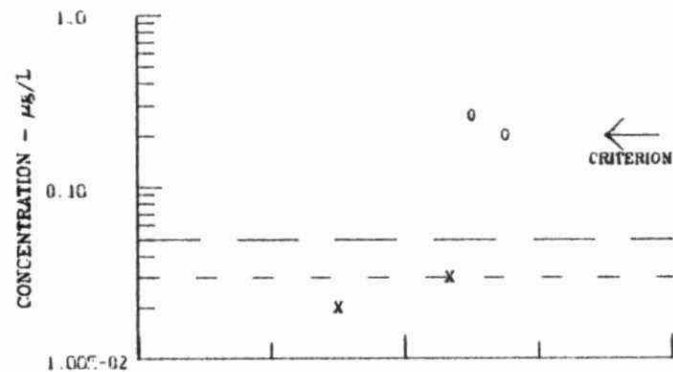
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - MERCURY



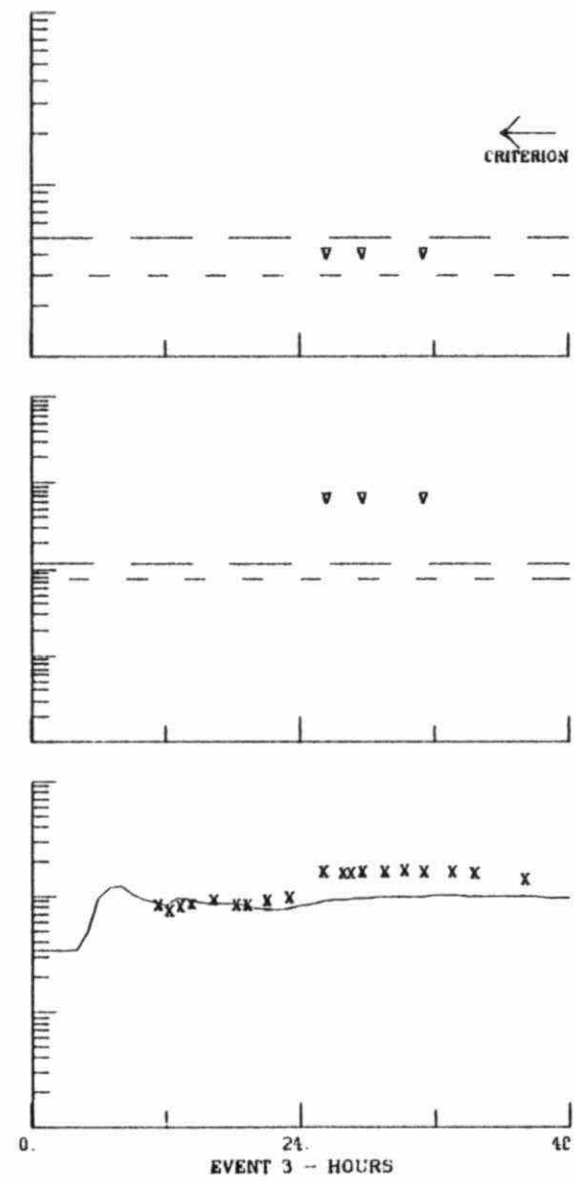
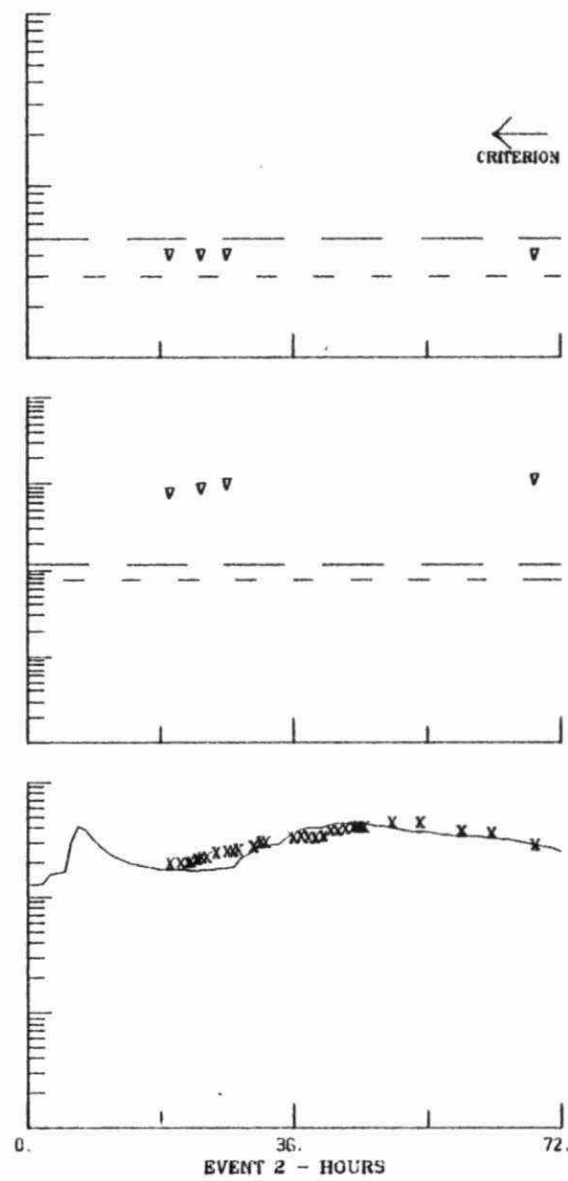
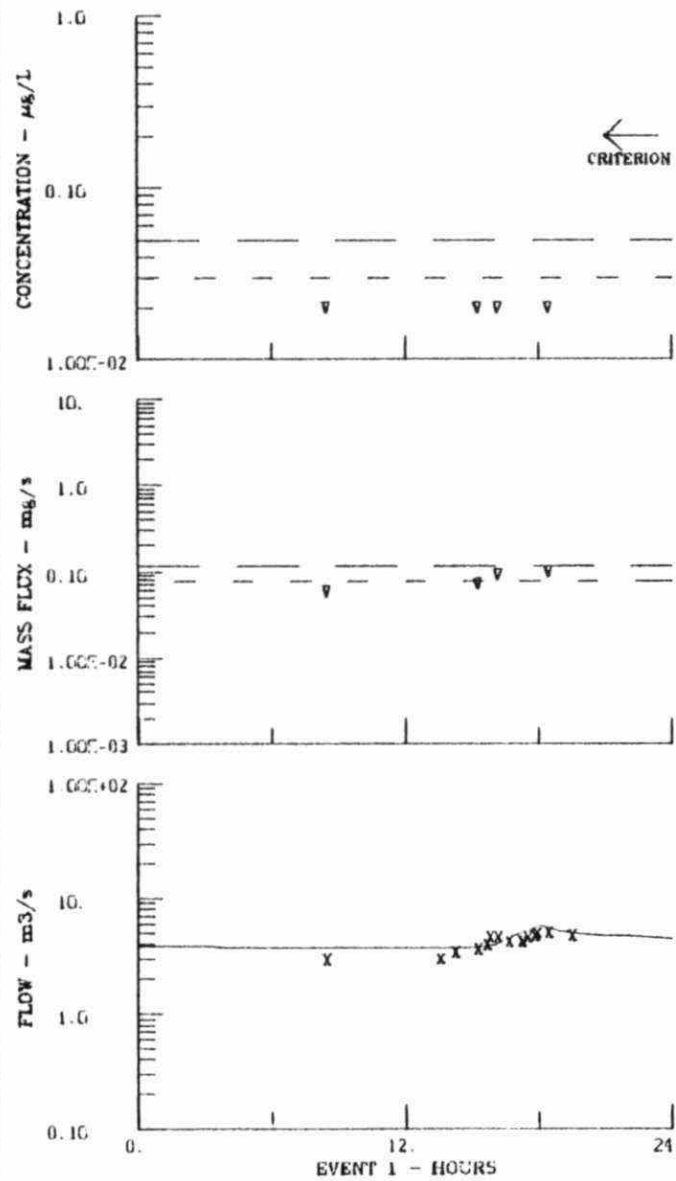
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - MERCURY



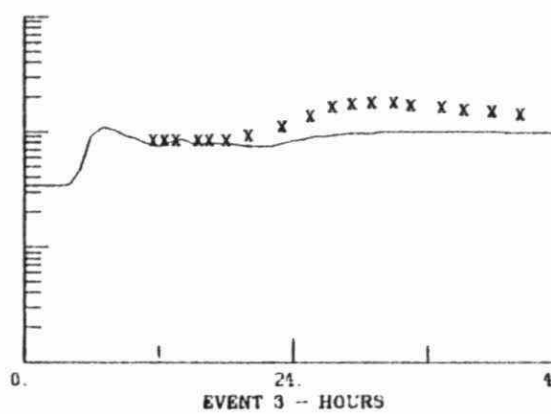
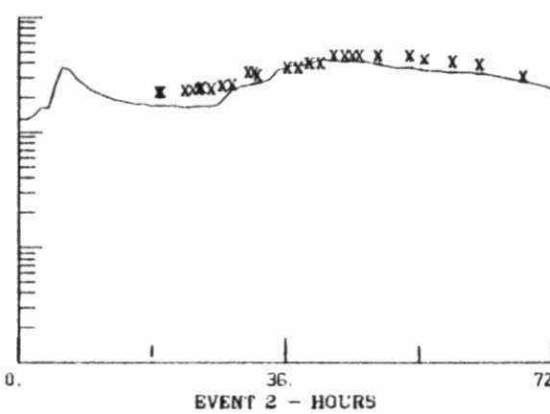
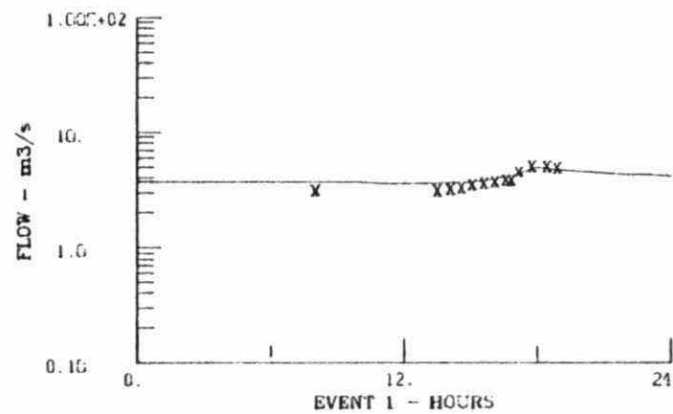
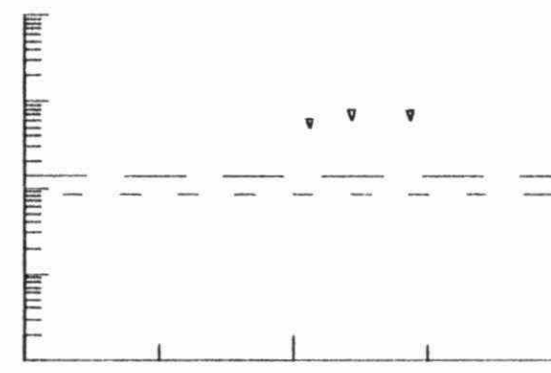
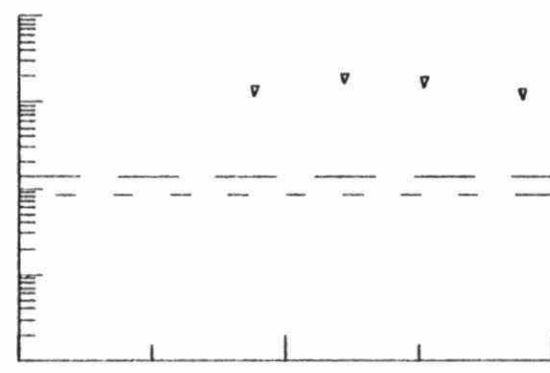
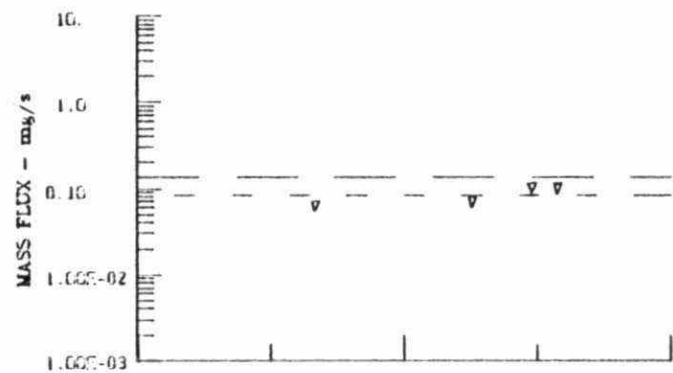
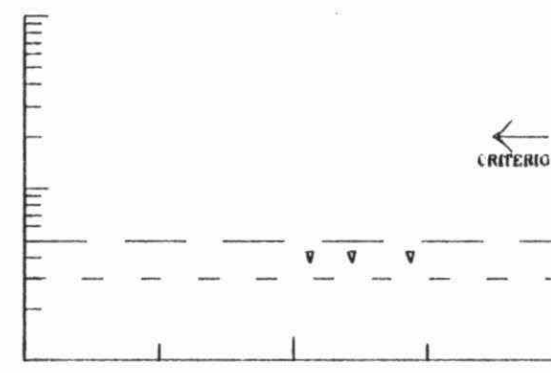
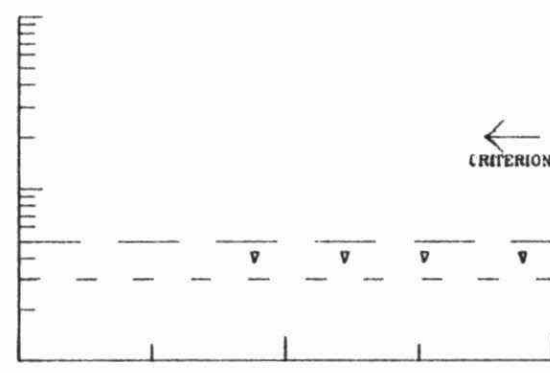
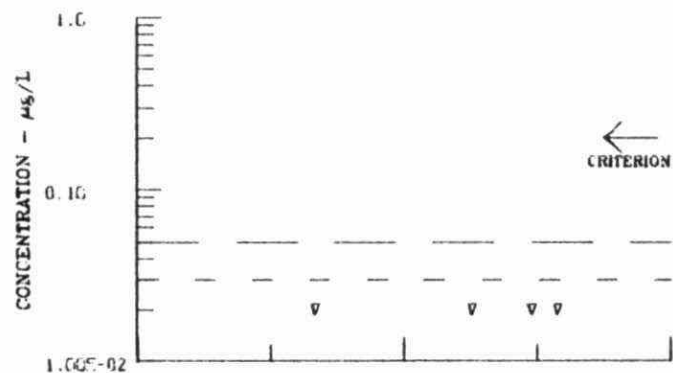
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - MERCURY



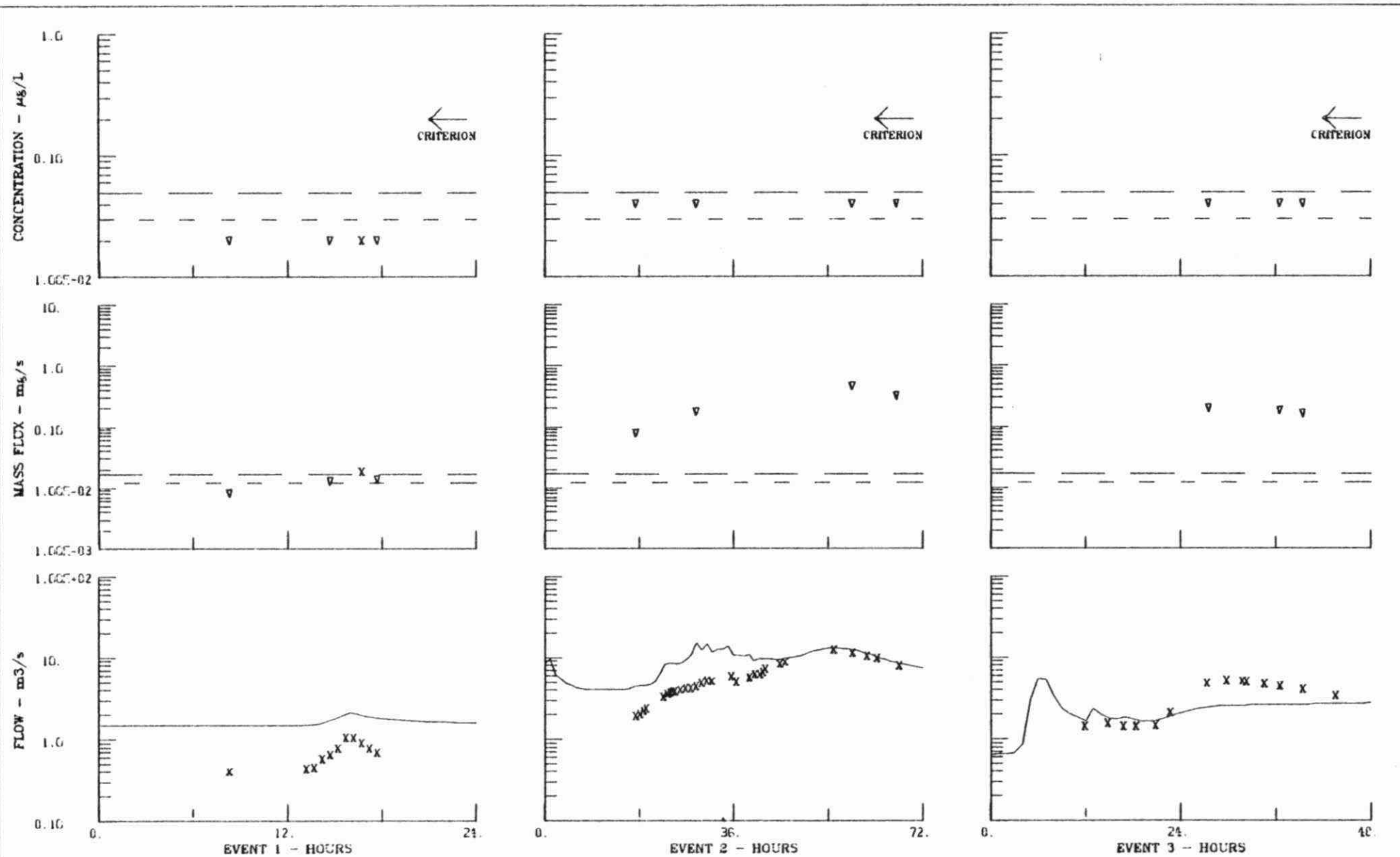
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - MERCURY



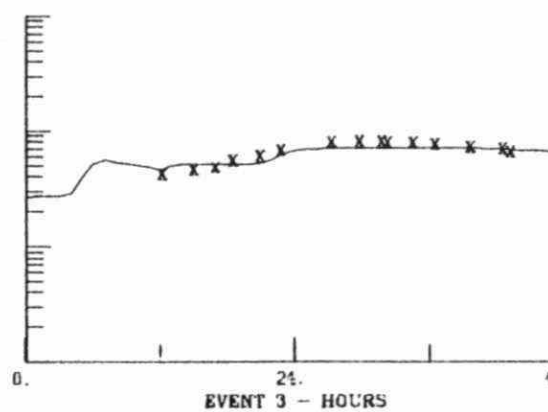
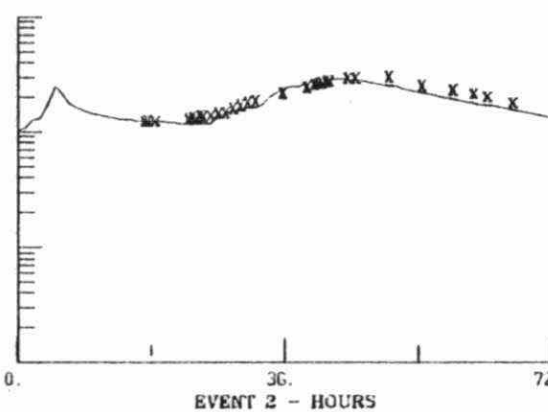
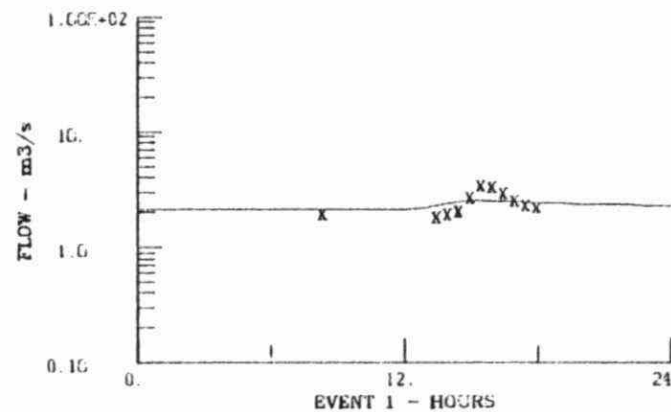
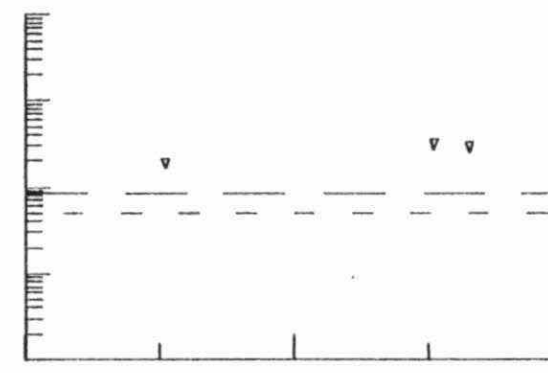
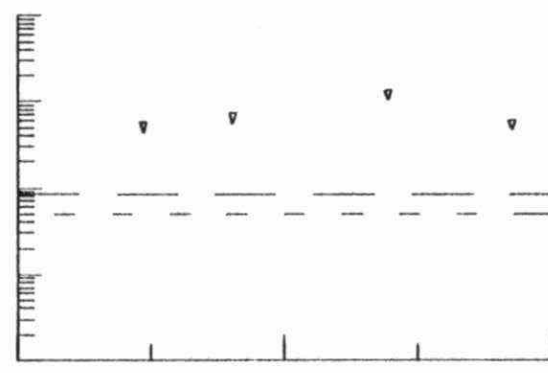
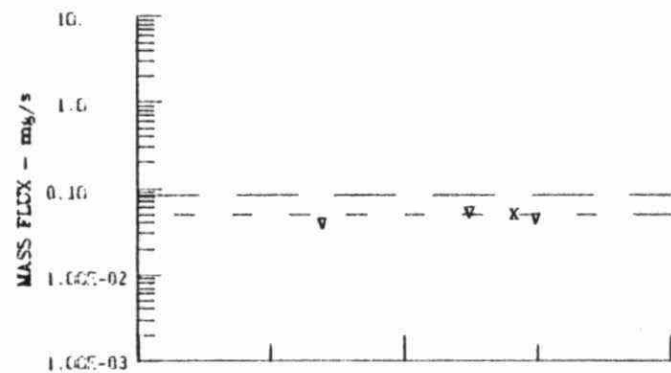
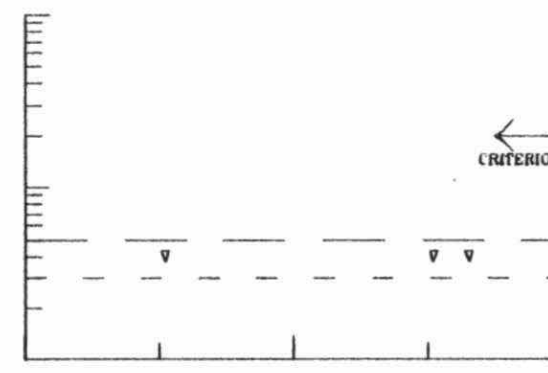
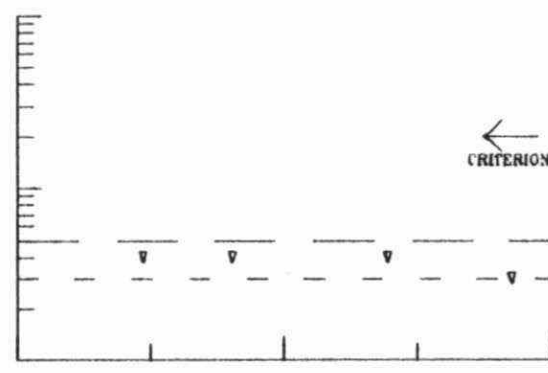
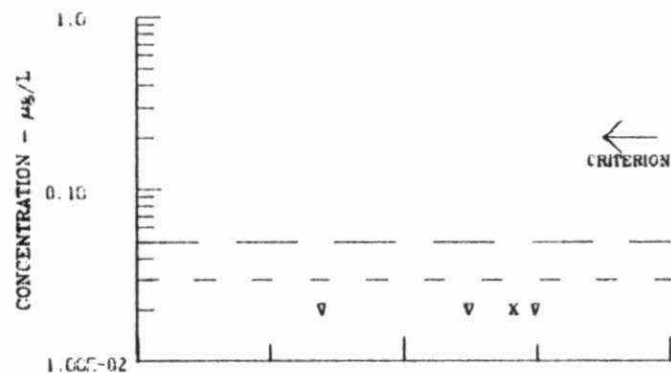
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - MERCURY



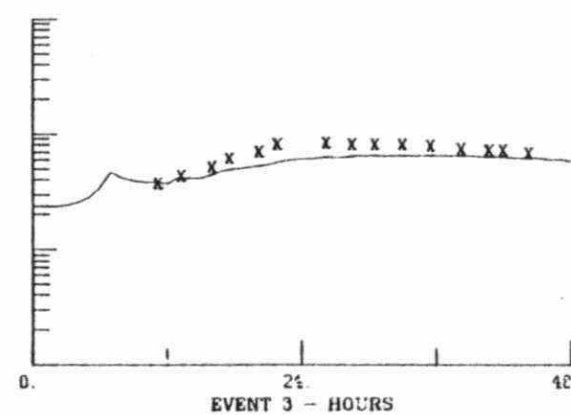
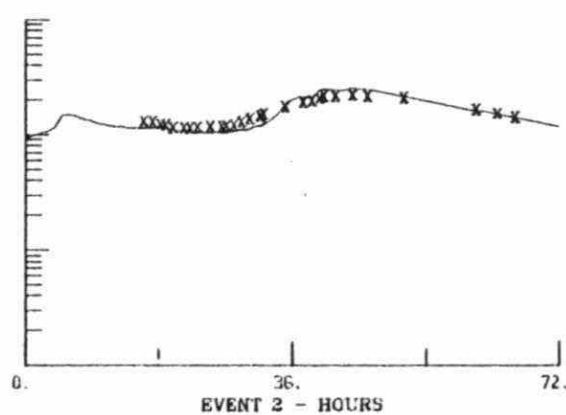
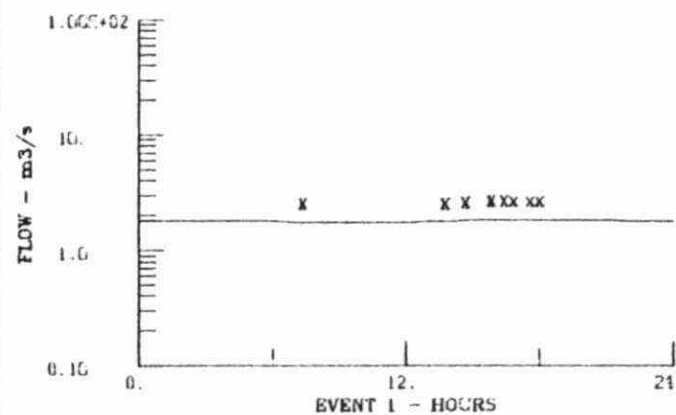
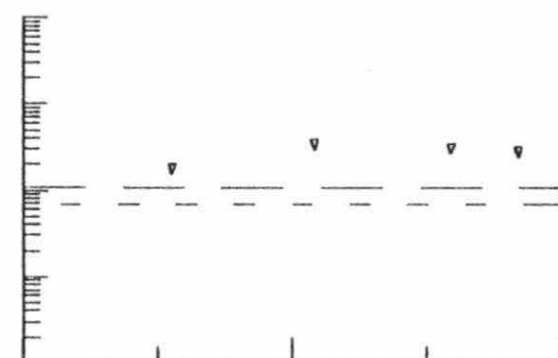
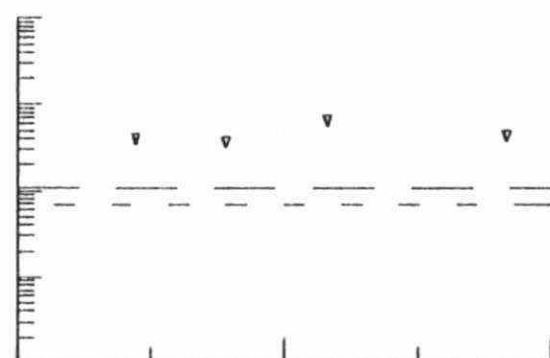
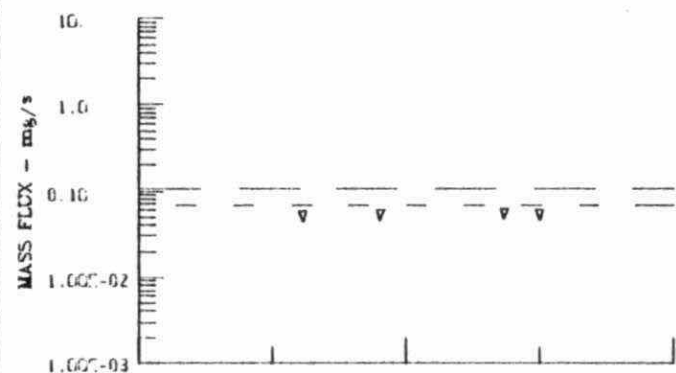
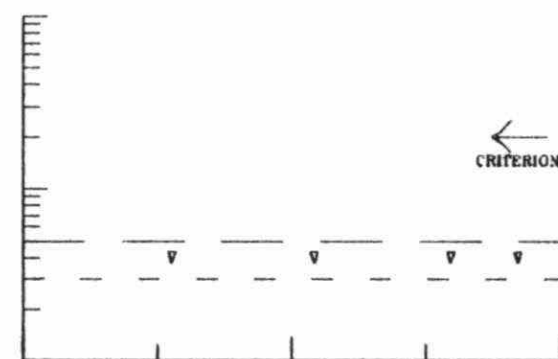
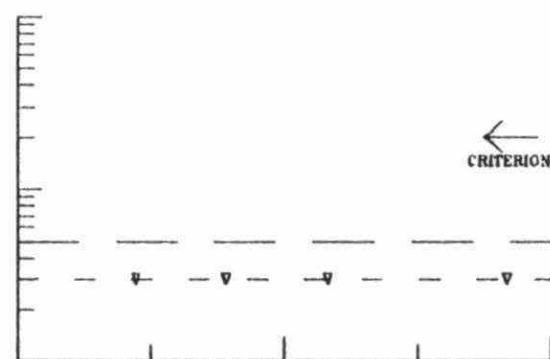
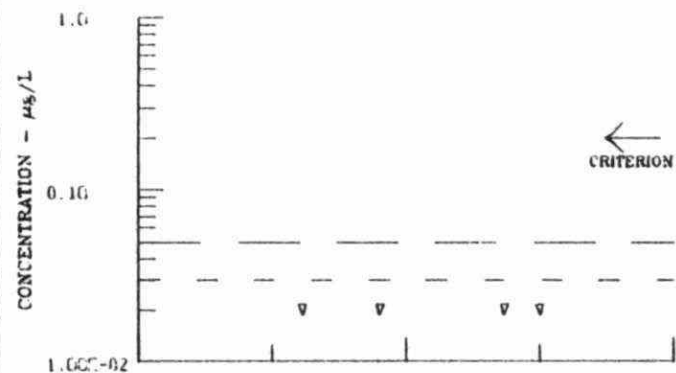
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - MERCURY



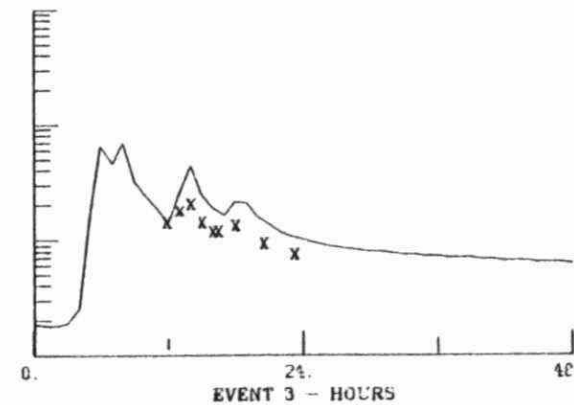
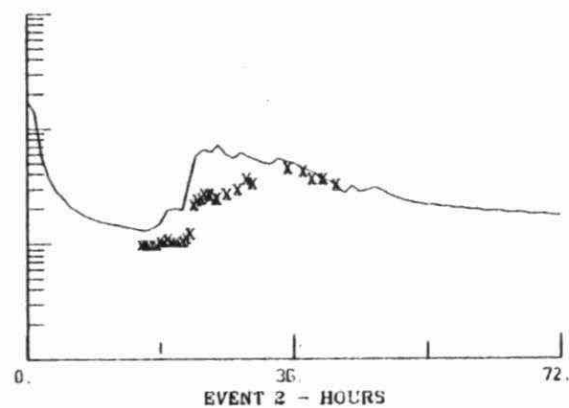
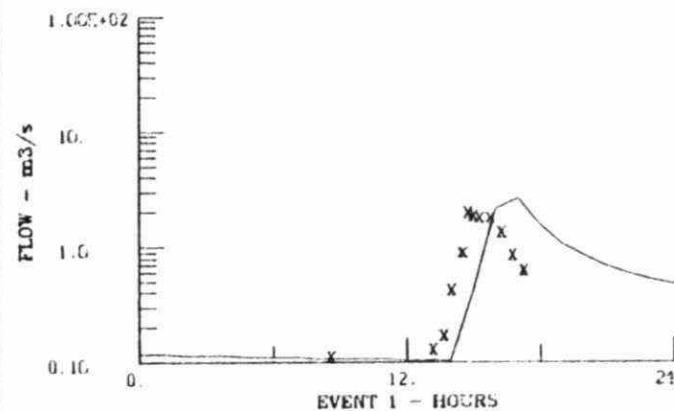
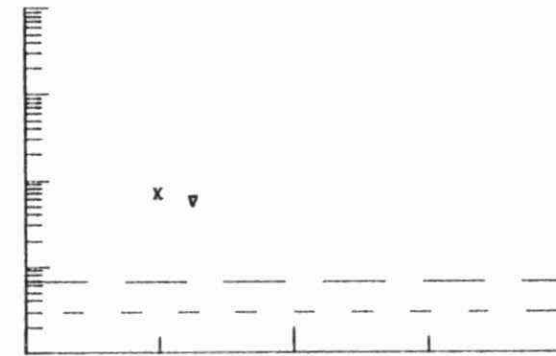
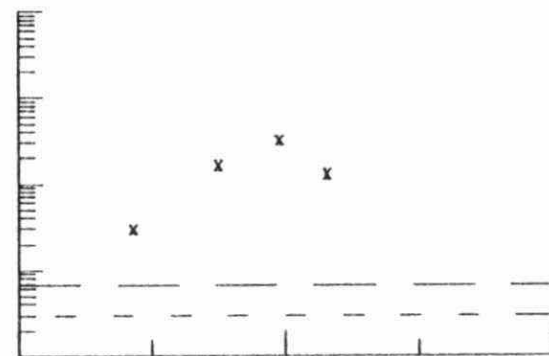
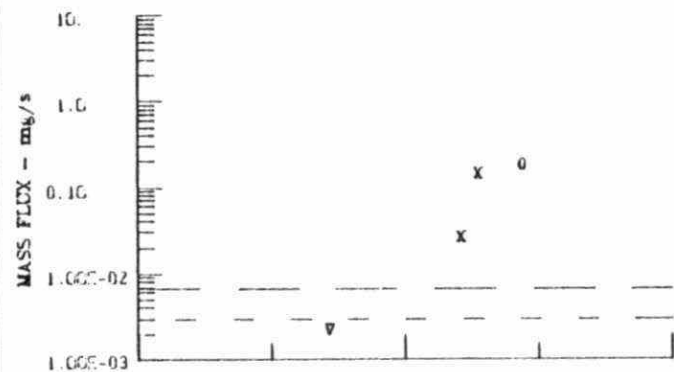
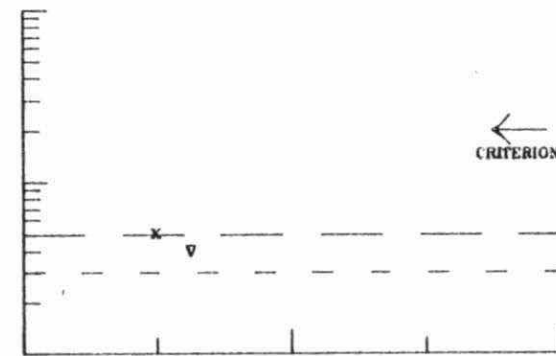
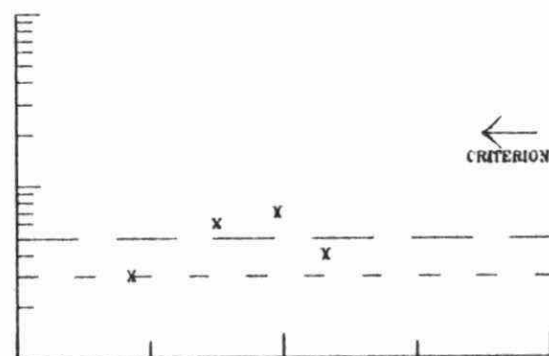
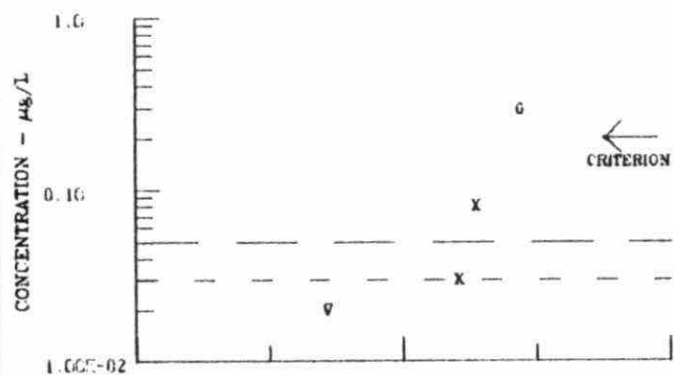
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - MERCURY



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - MERCURY

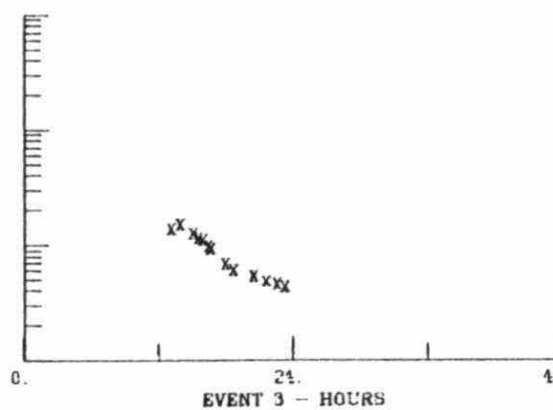
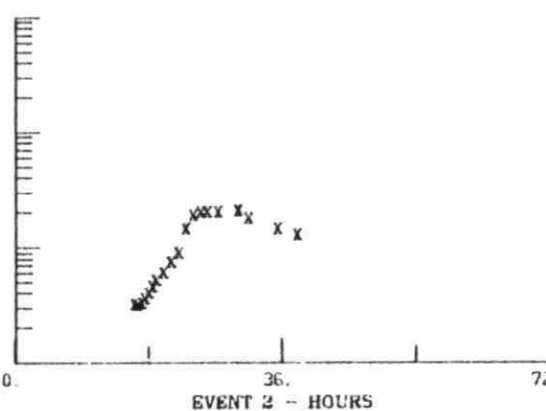
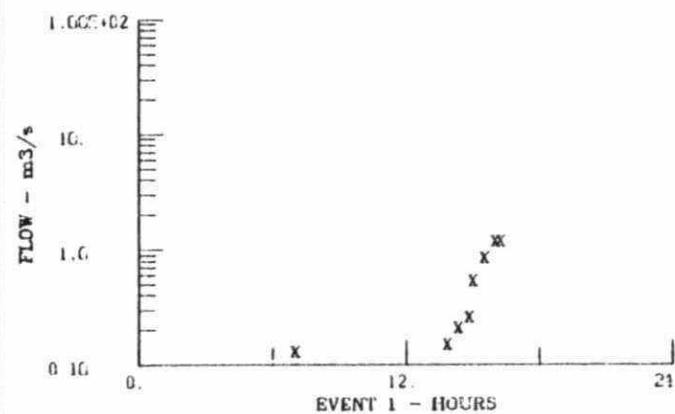
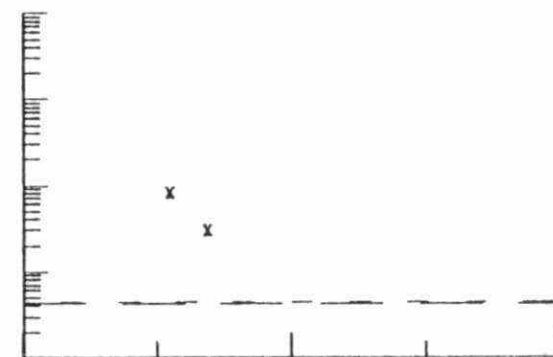
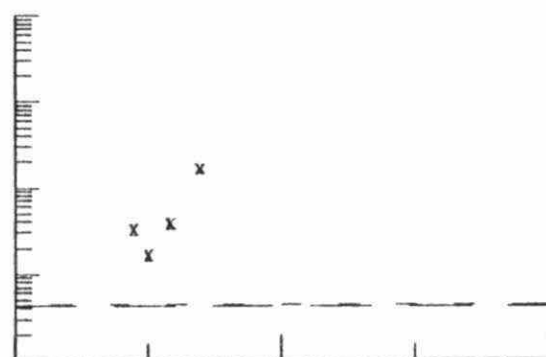
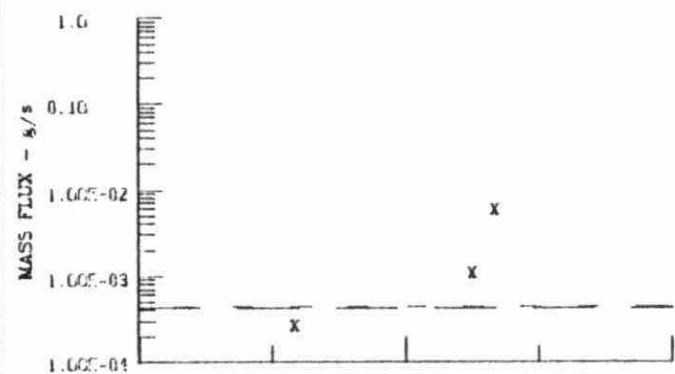
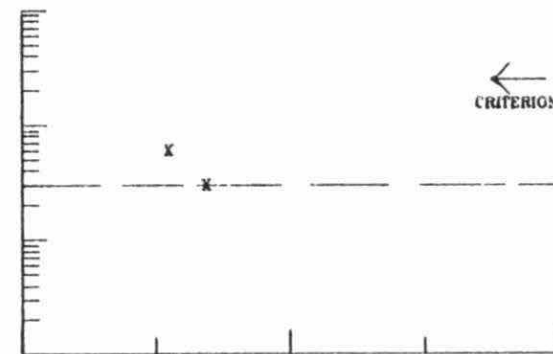
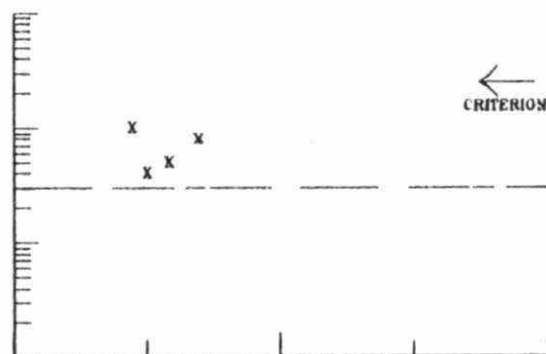
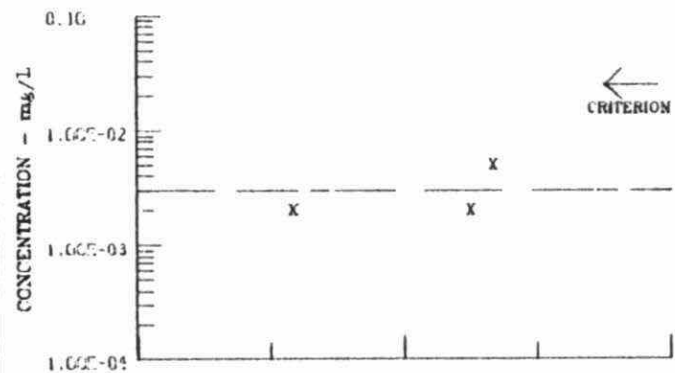


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - MERCURY

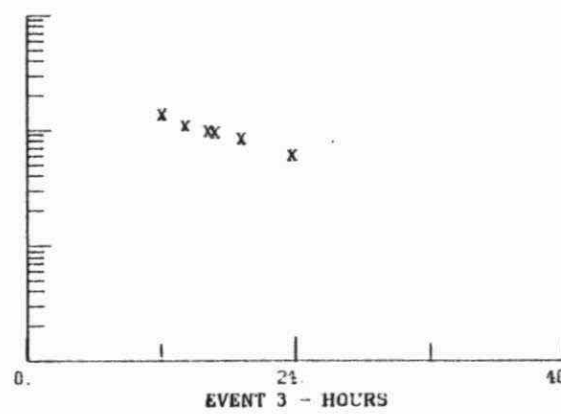
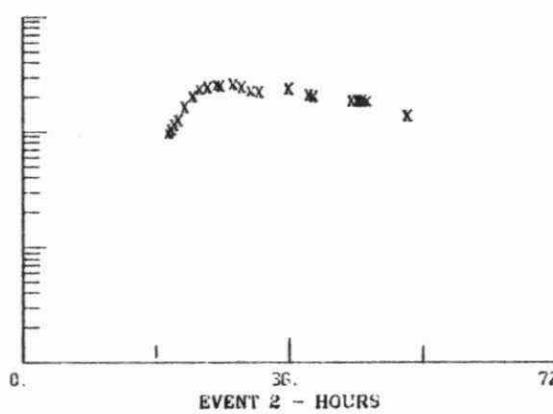
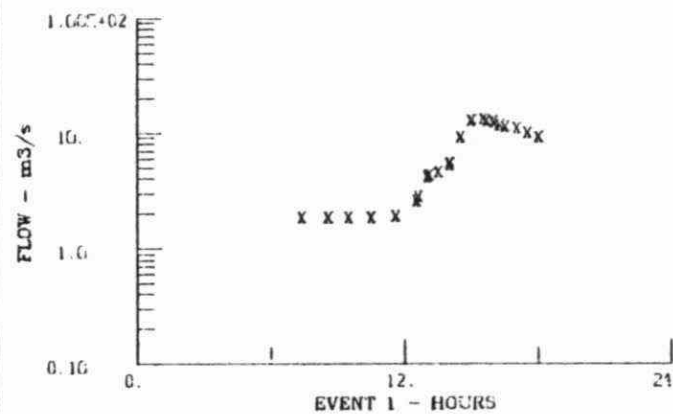
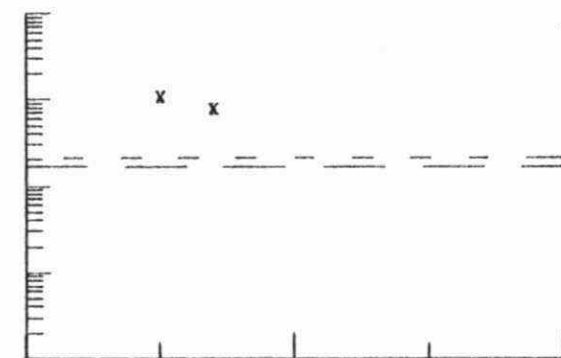
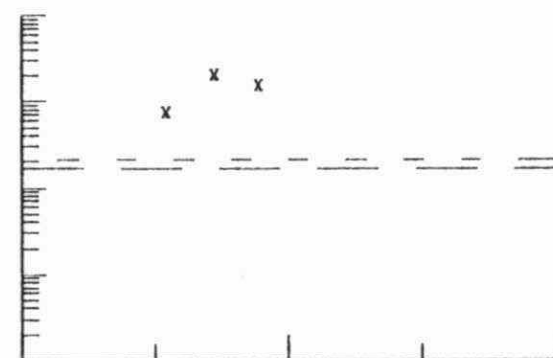
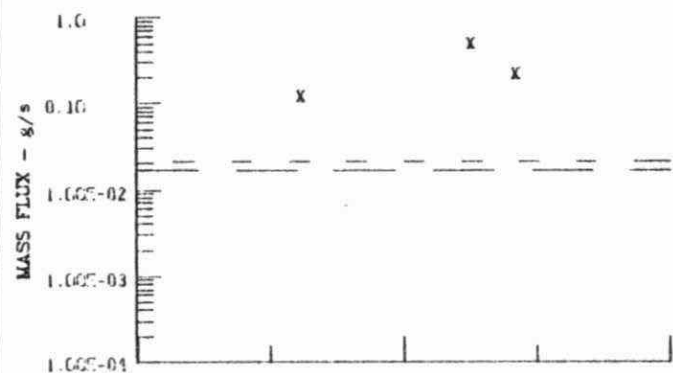
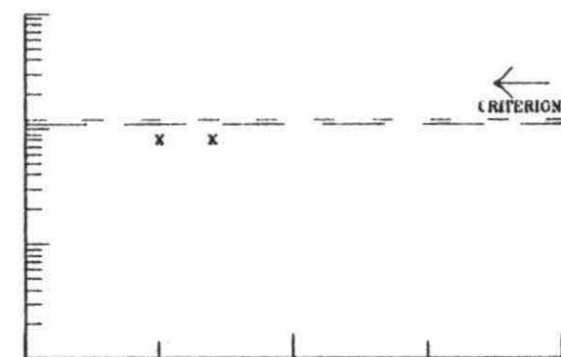
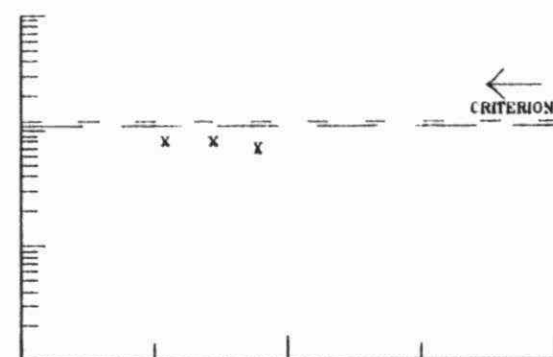
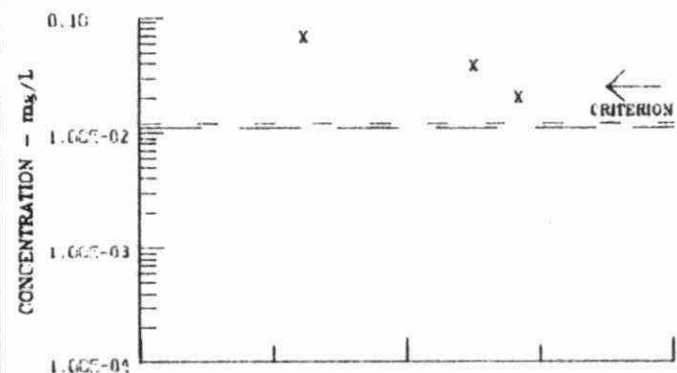


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - MERCURY

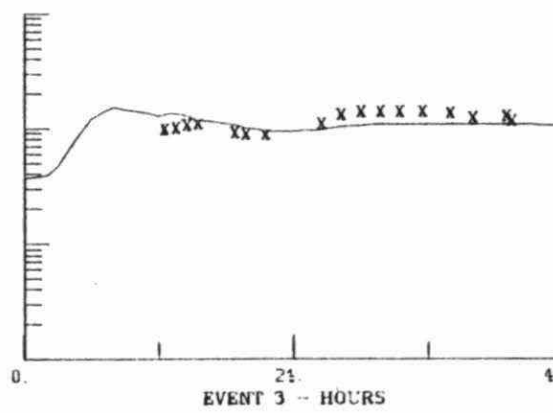
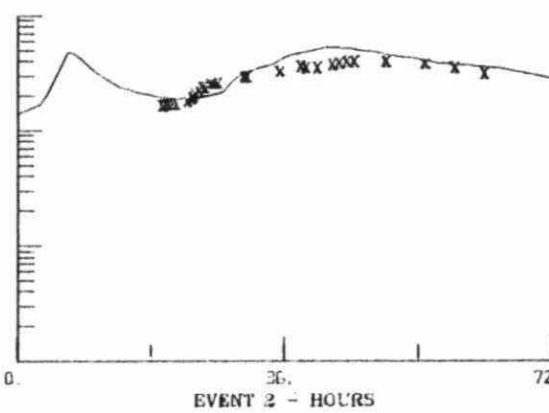
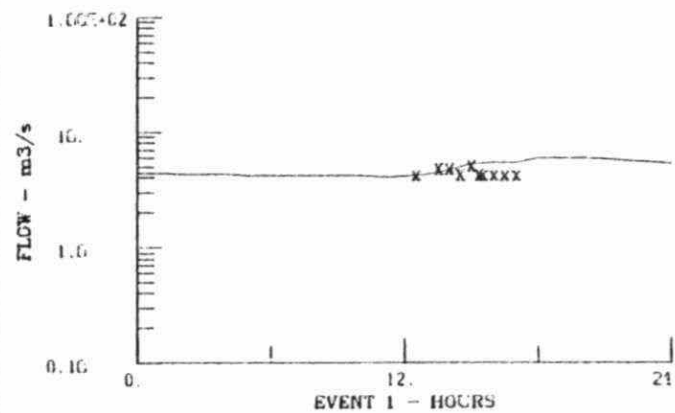
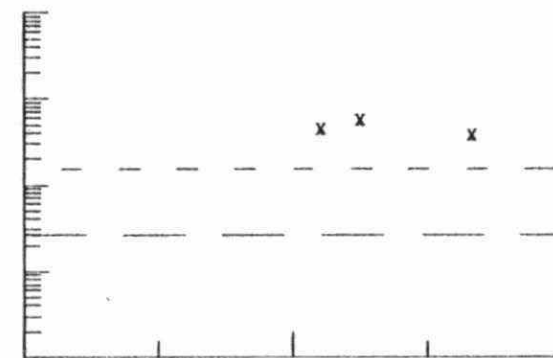
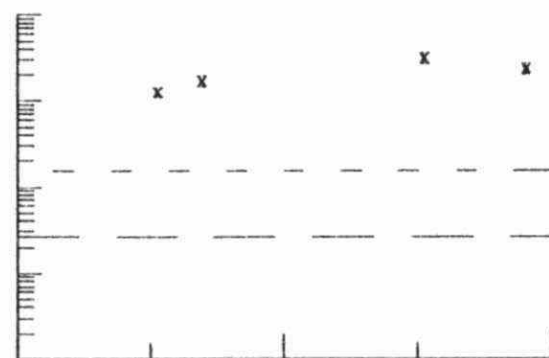
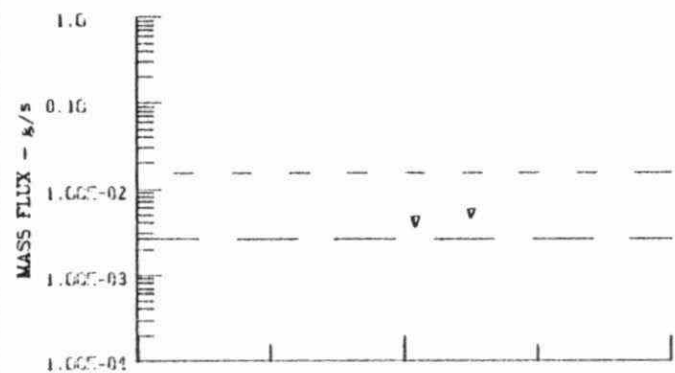
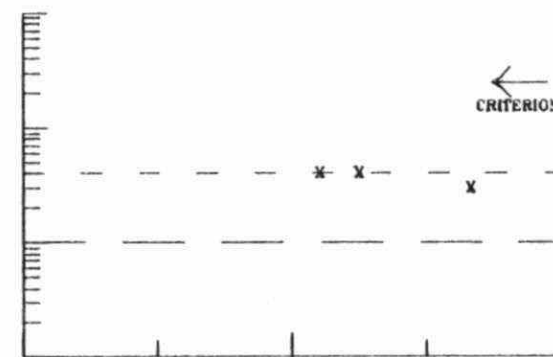
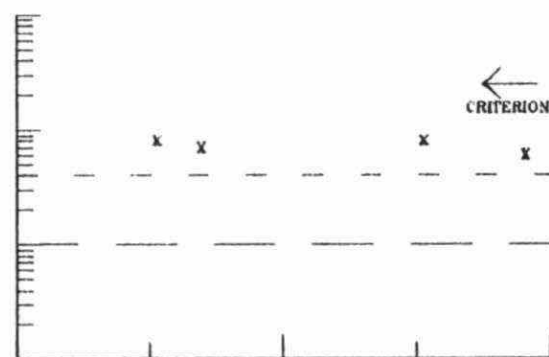
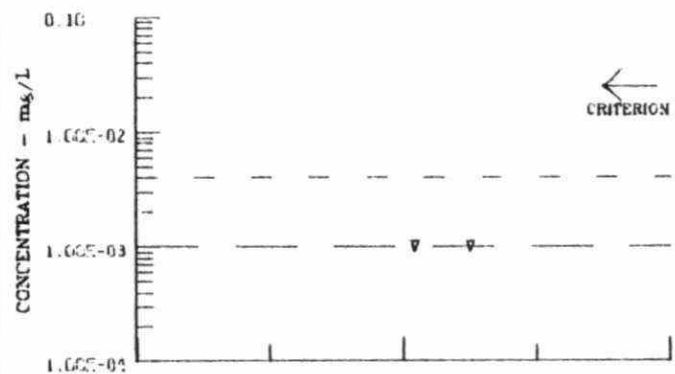
NICKEL



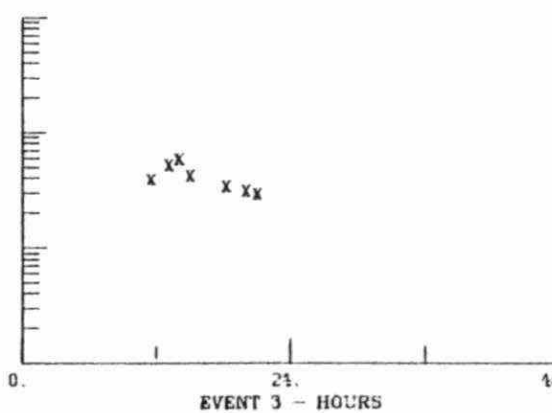
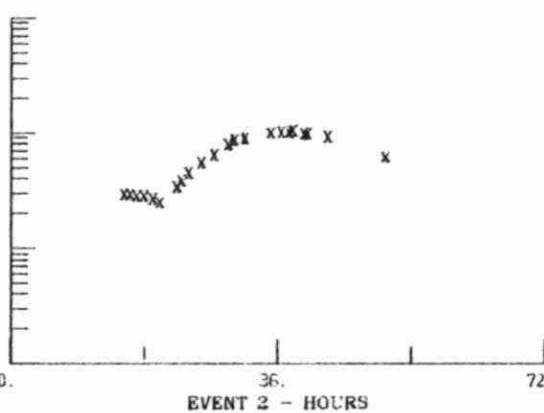
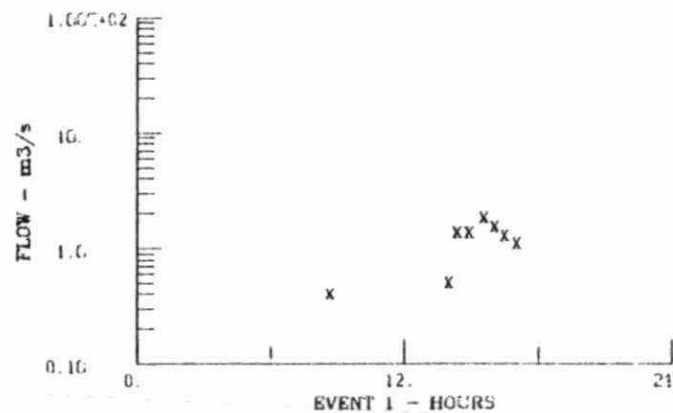
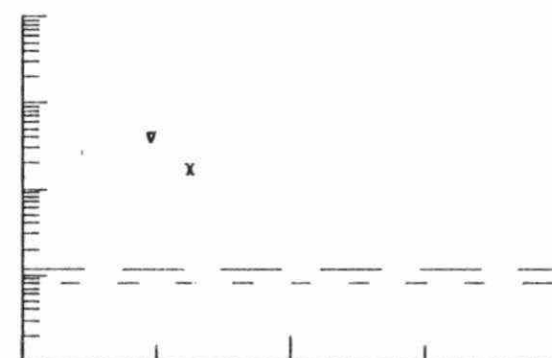
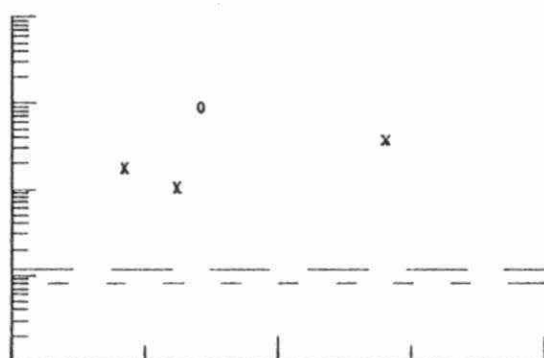
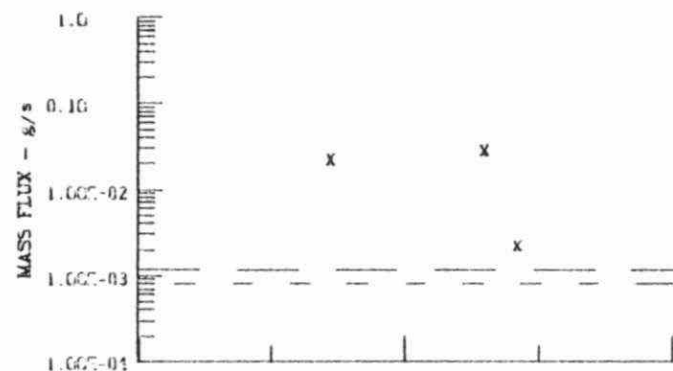
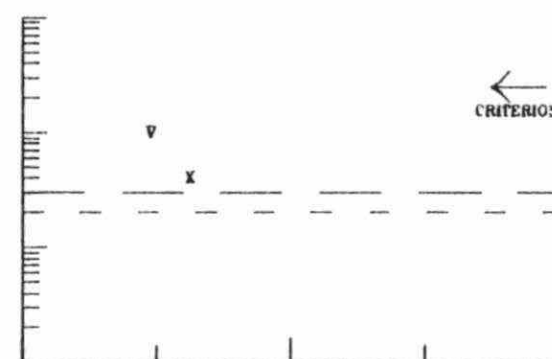
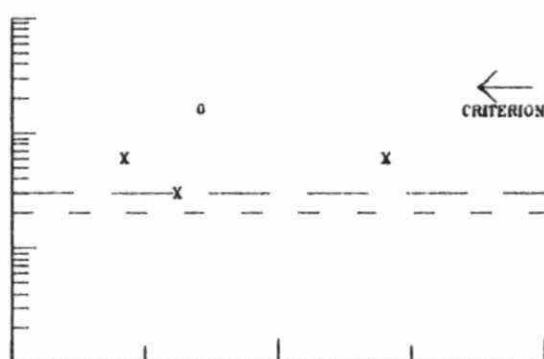
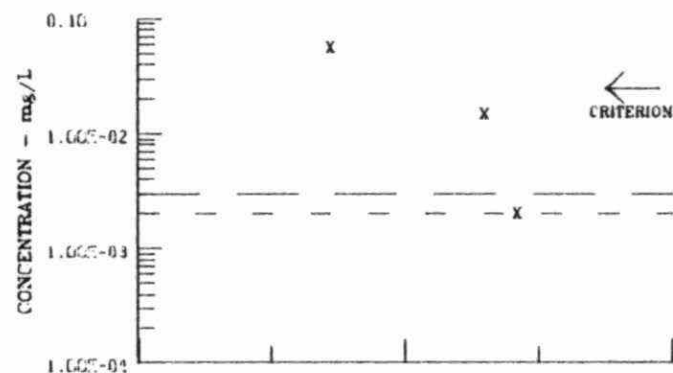
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - NICKEL



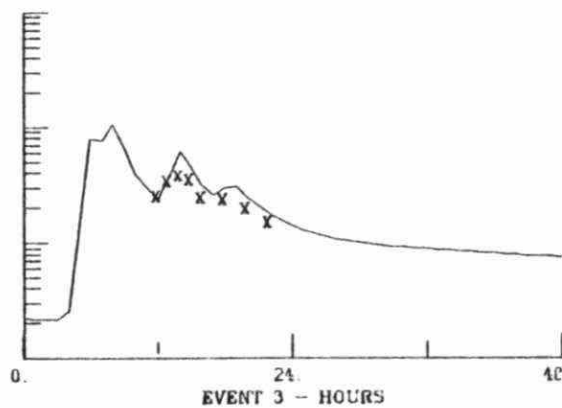
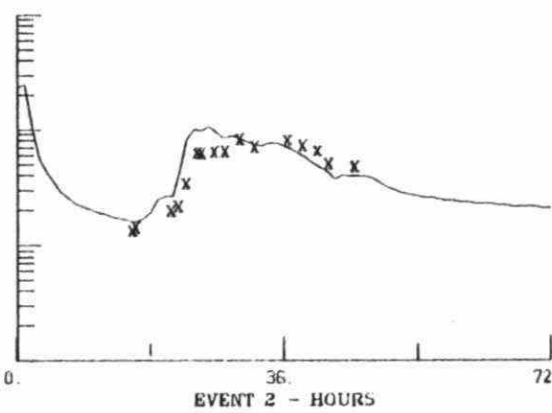
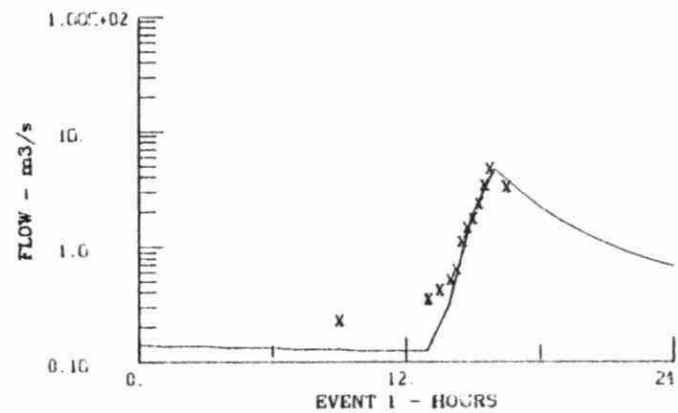
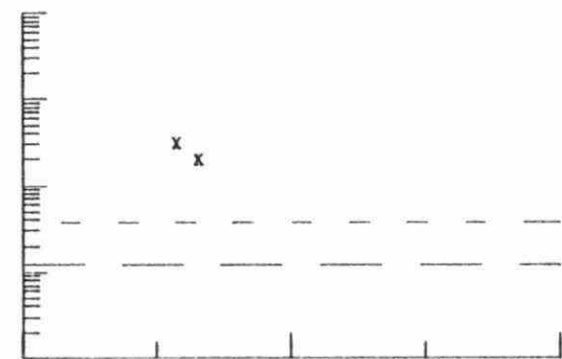
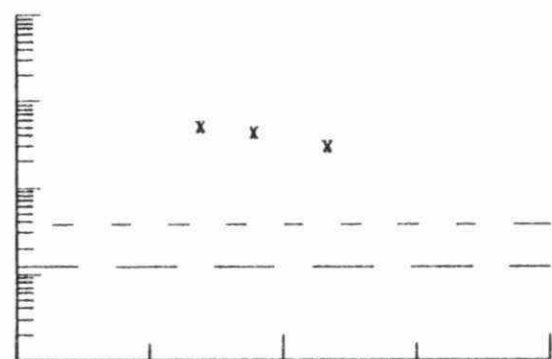
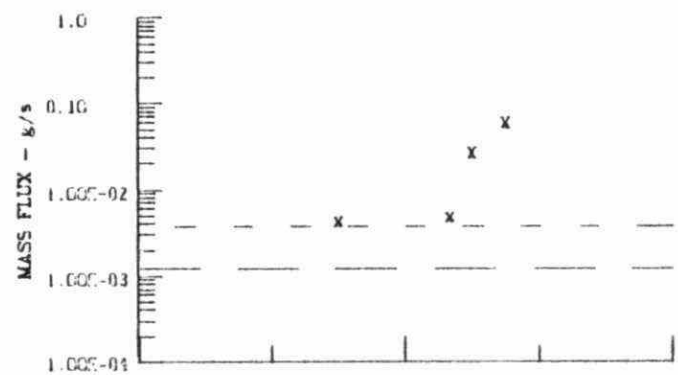
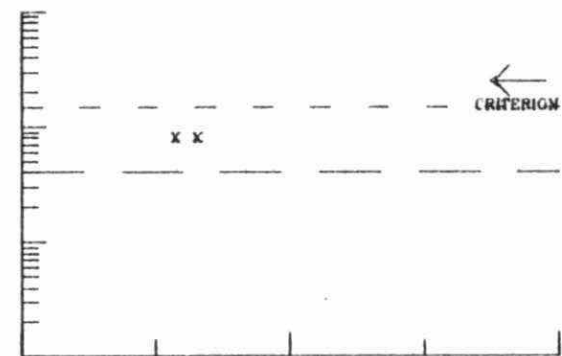
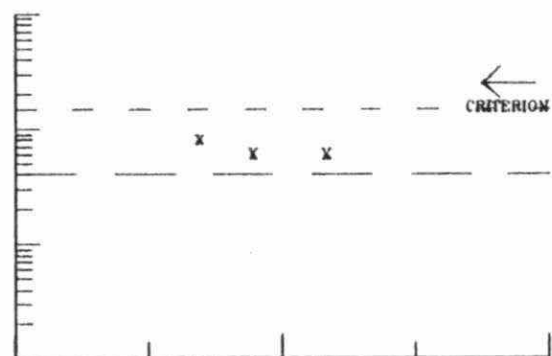
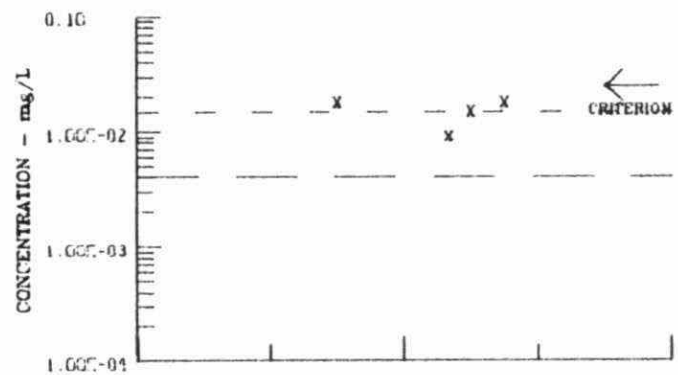
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - NICKEL



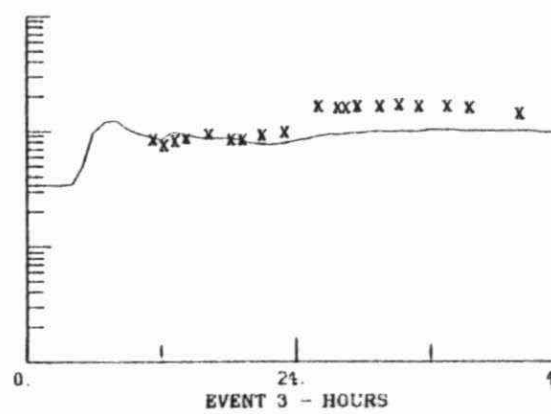
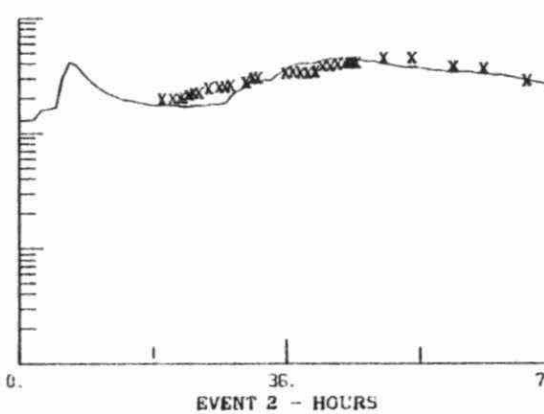
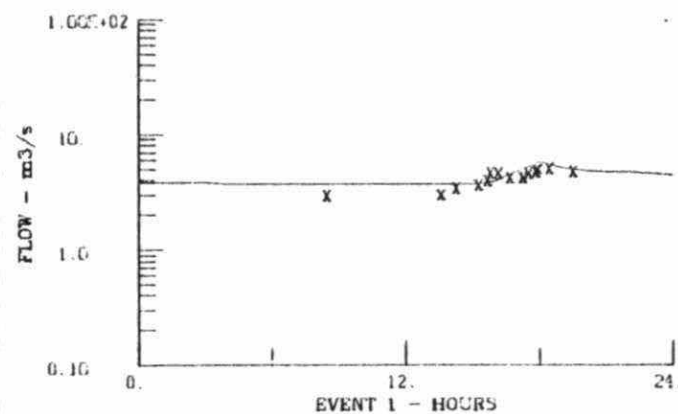
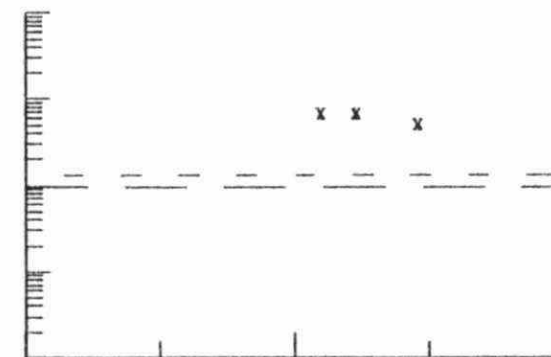
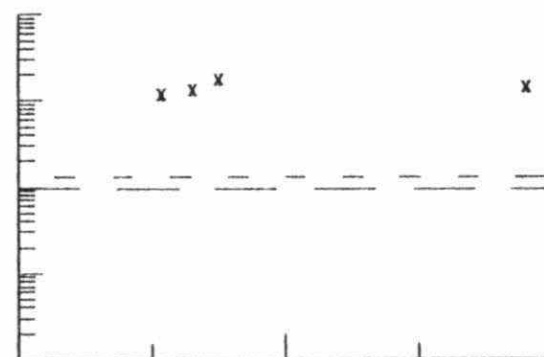
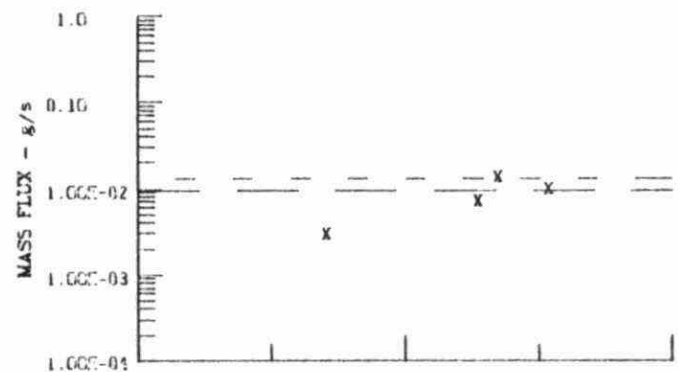
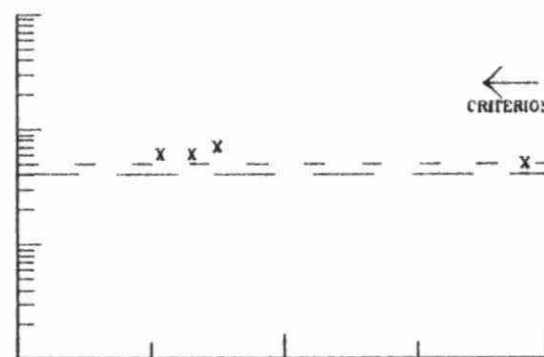
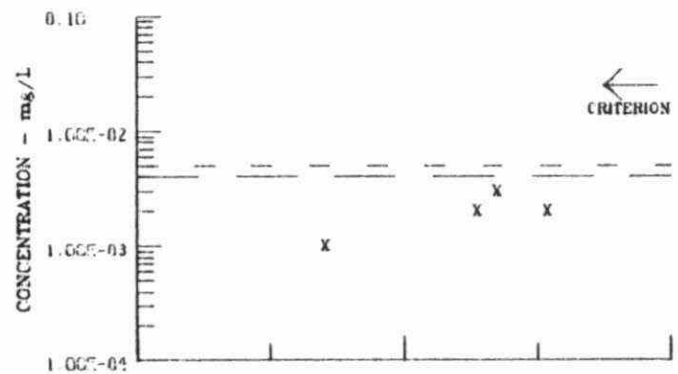
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - NICKEL



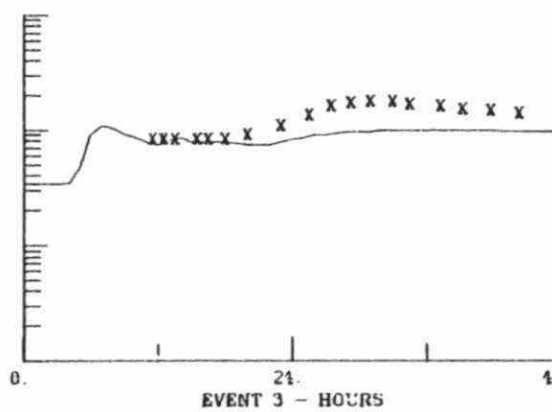
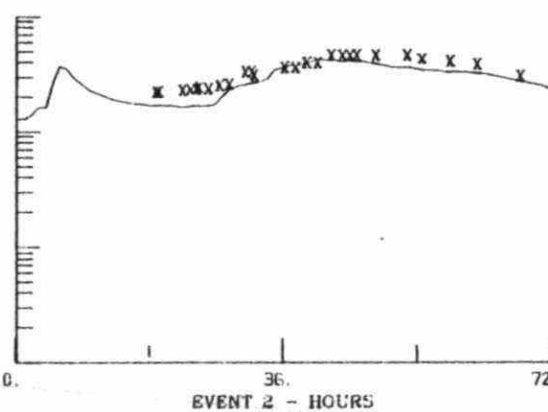
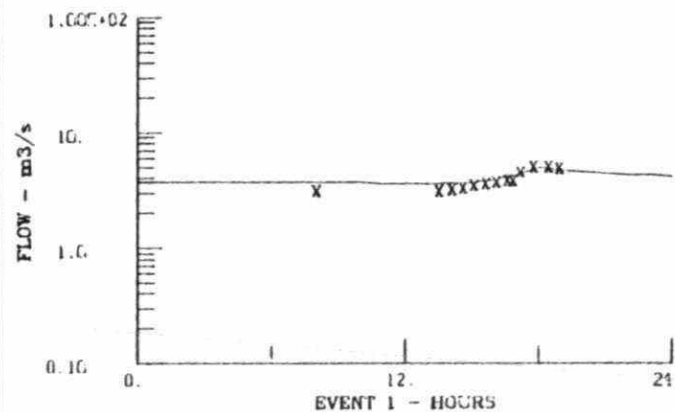
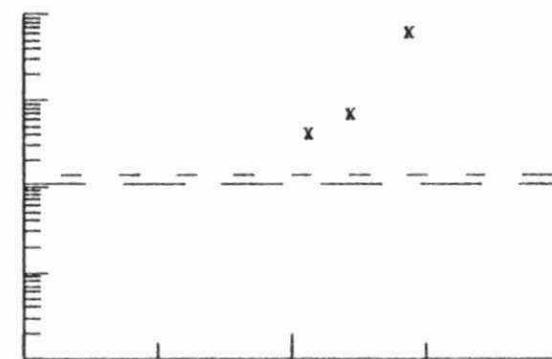
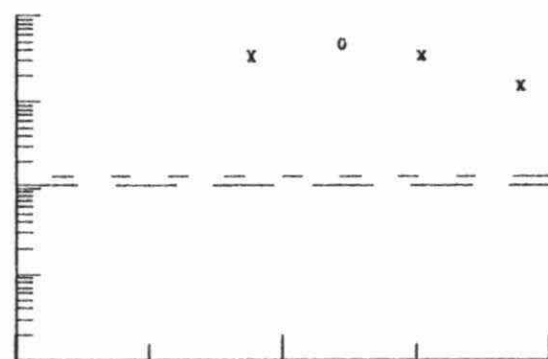
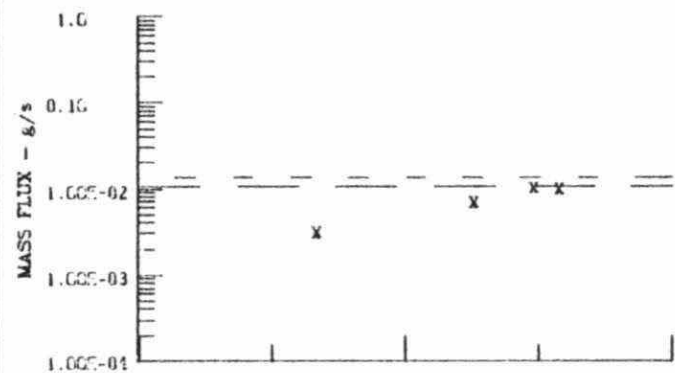
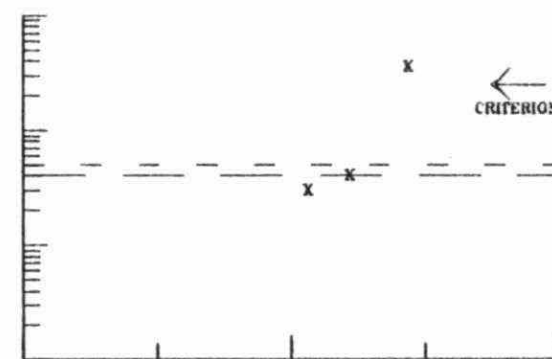
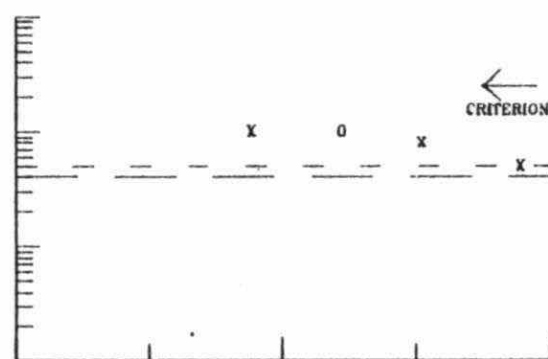
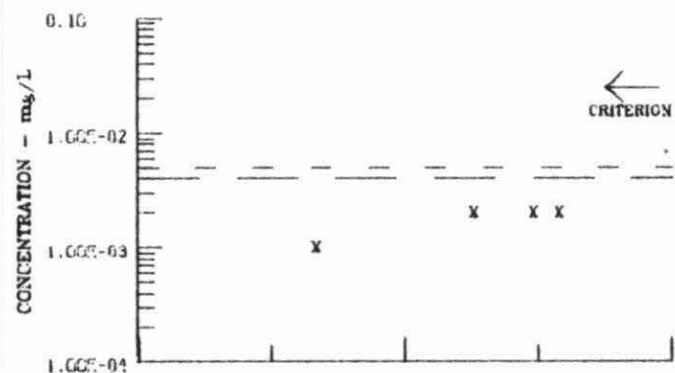
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - NICKEL



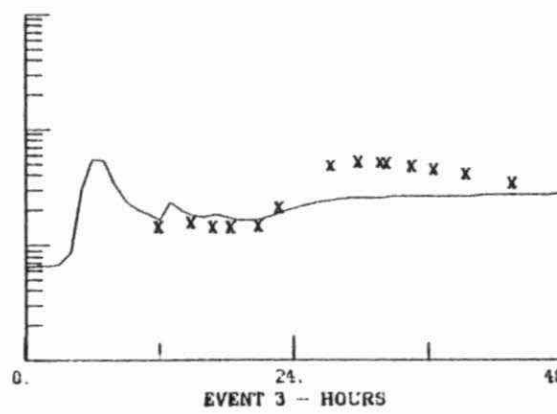
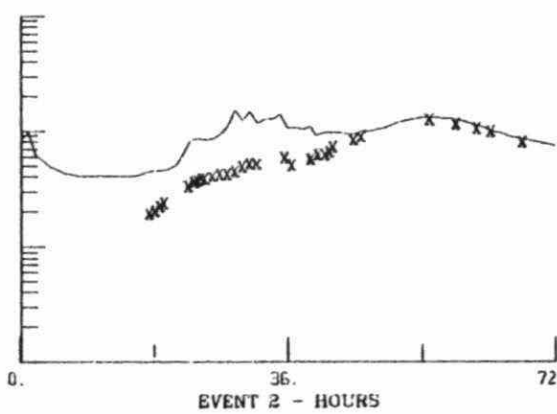
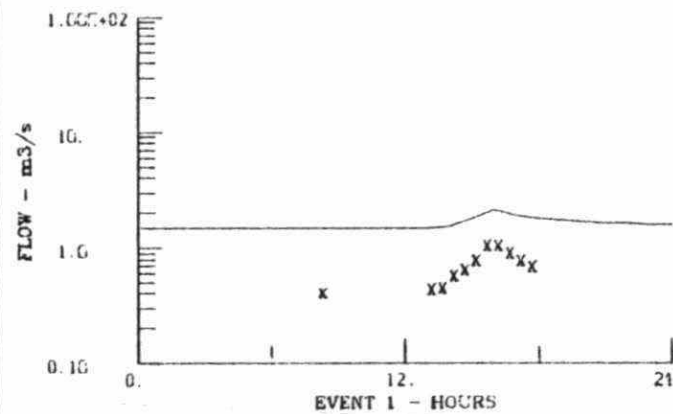
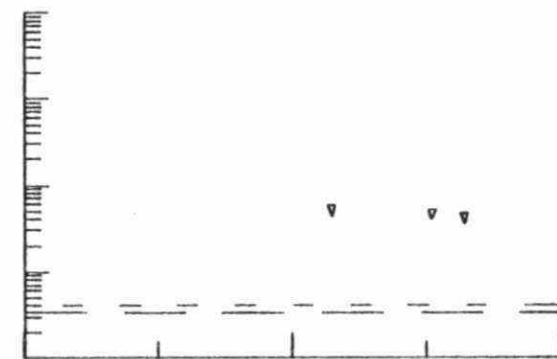
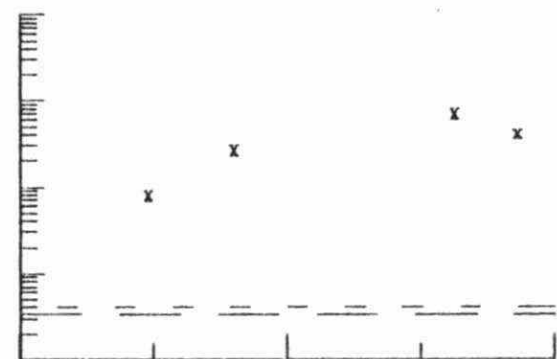
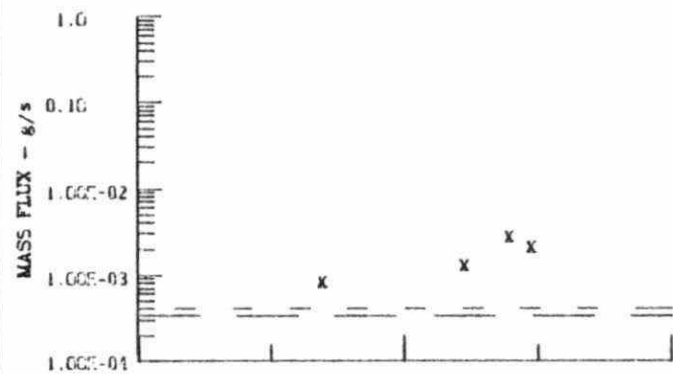
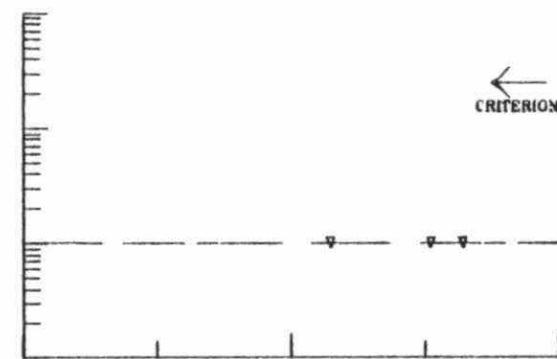
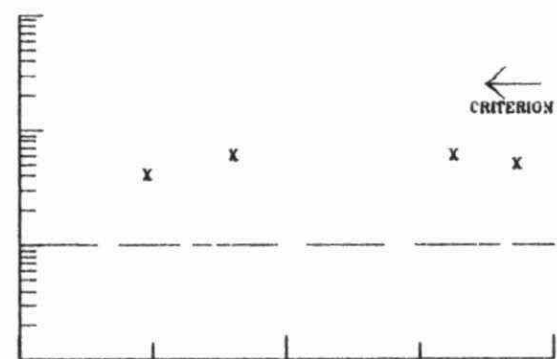
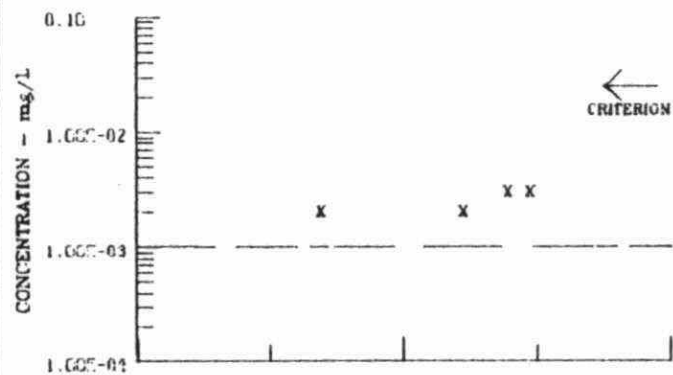
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - NICKEL



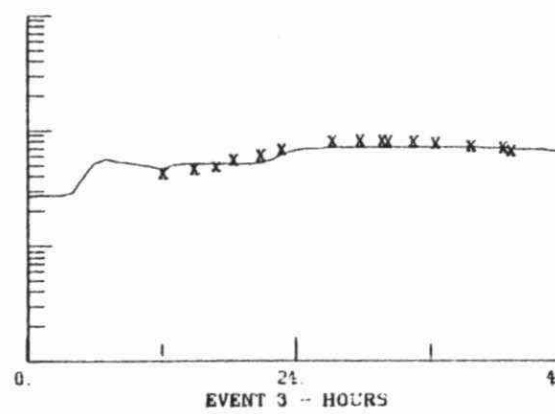
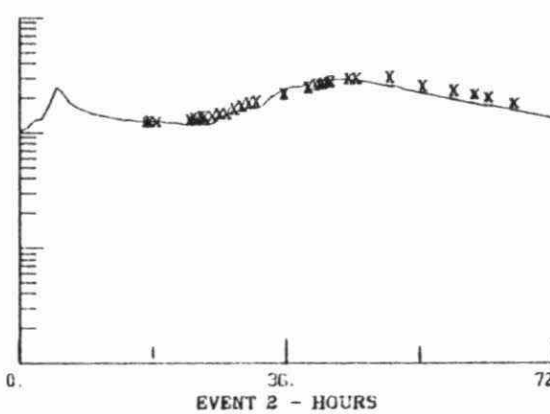
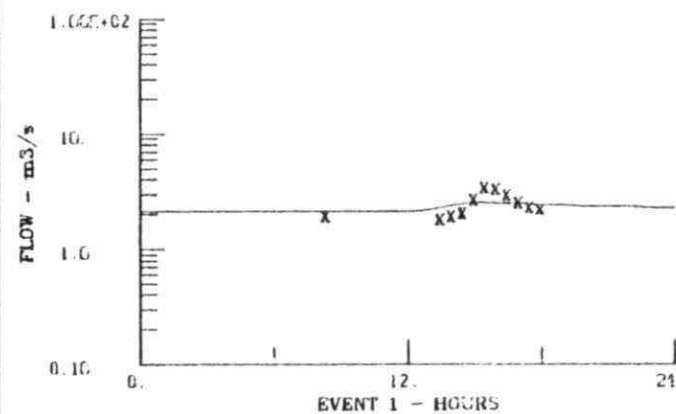
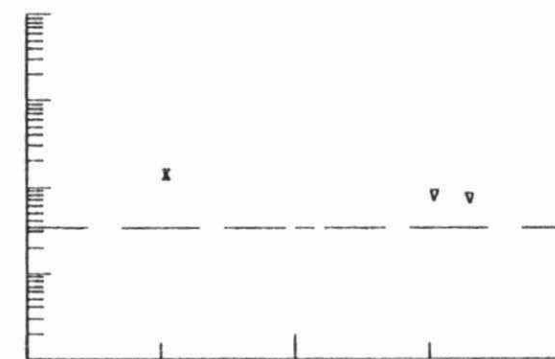
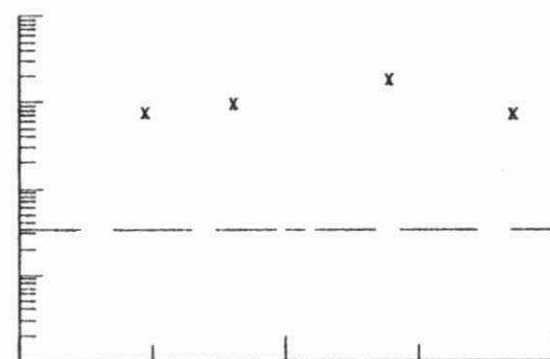
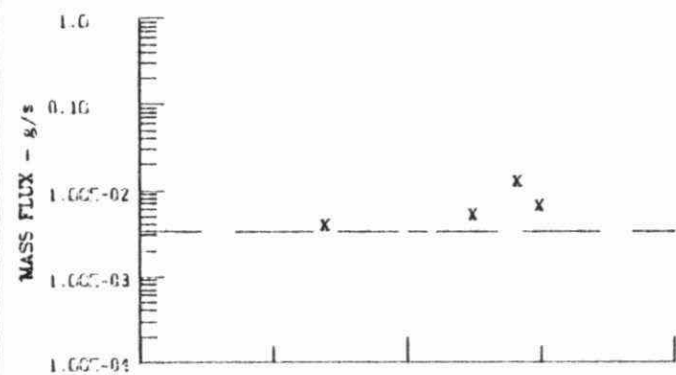
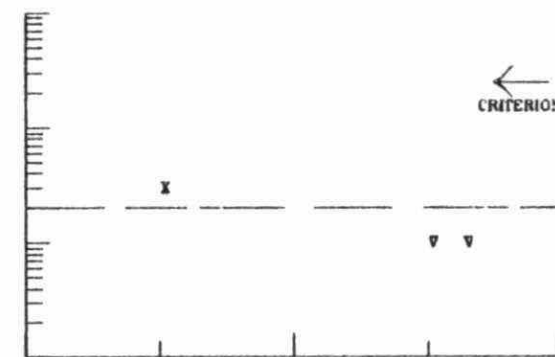
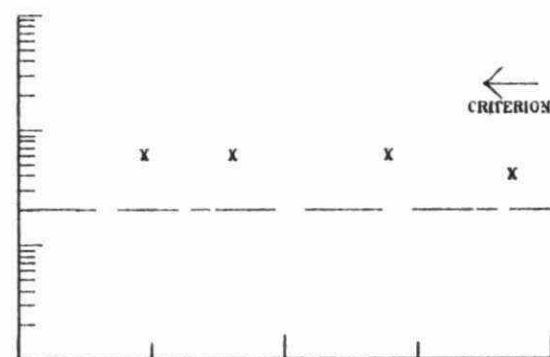
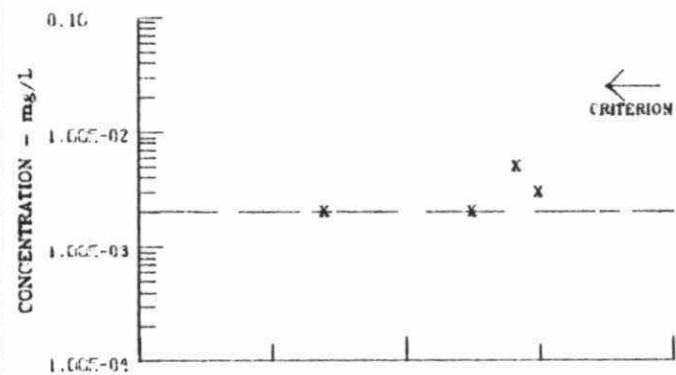
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - NICKEL



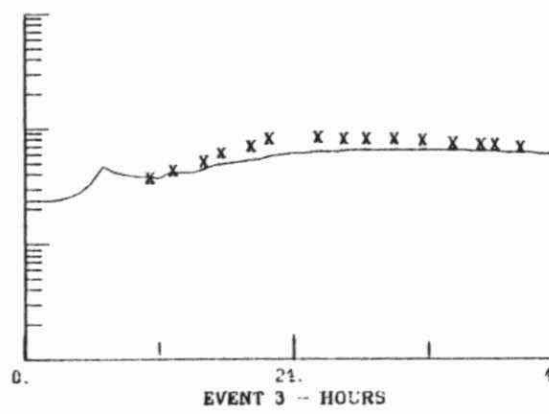
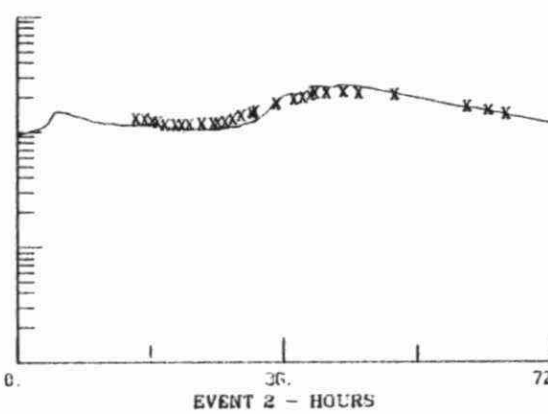
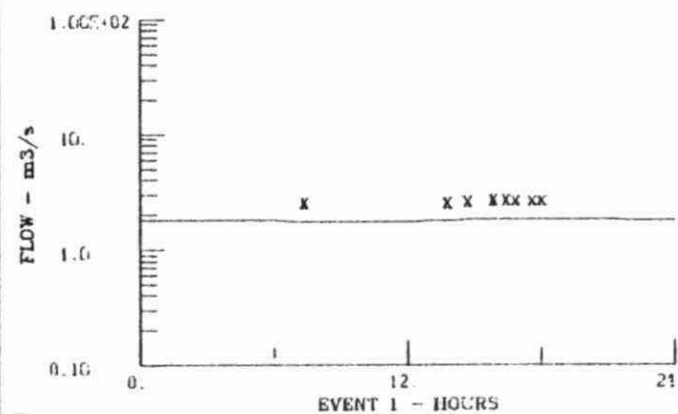
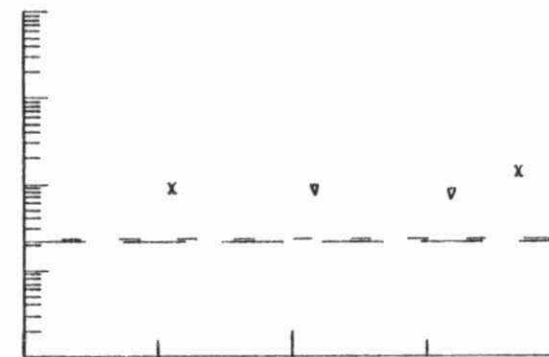
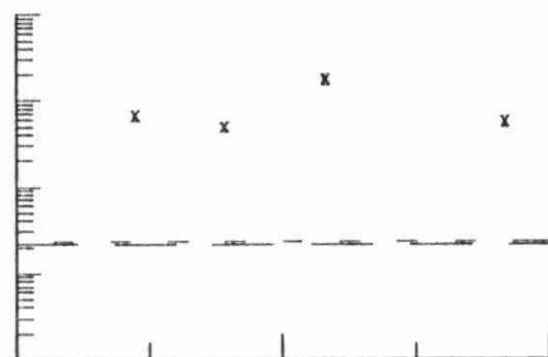
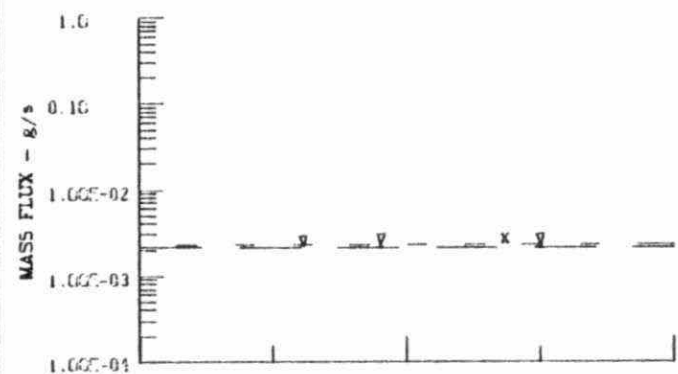
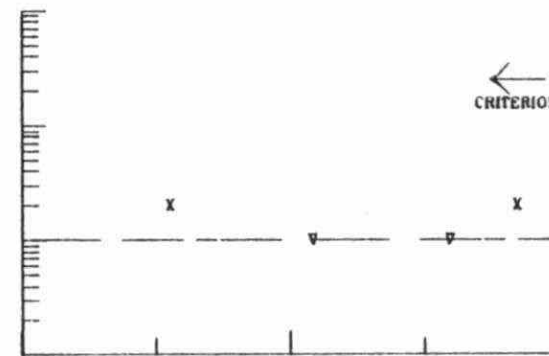
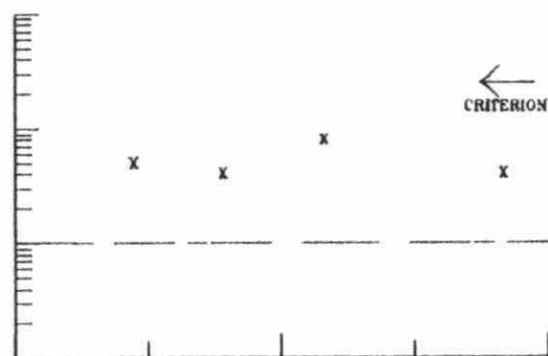
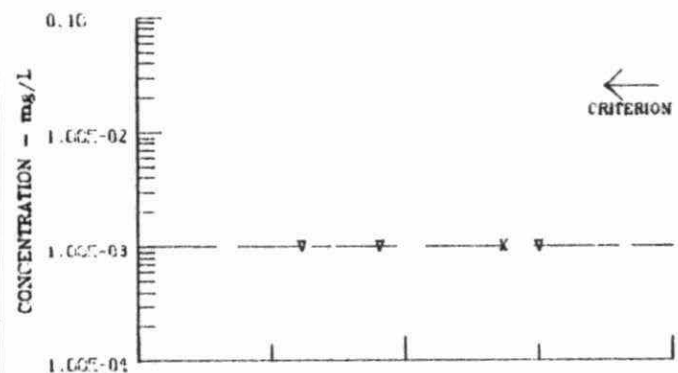
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - NICKEL



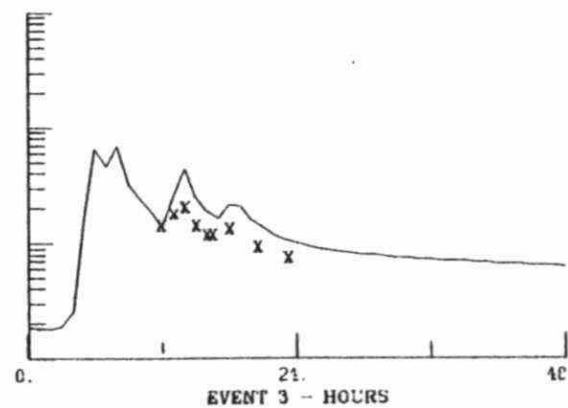
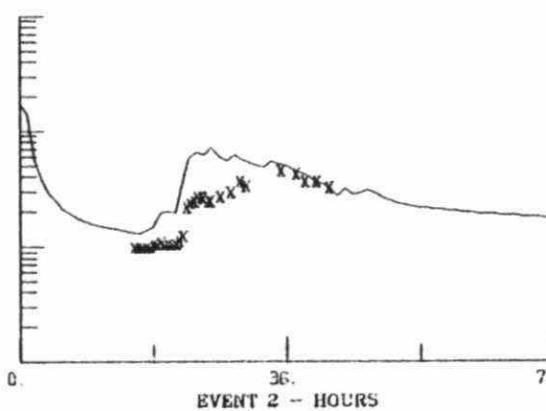
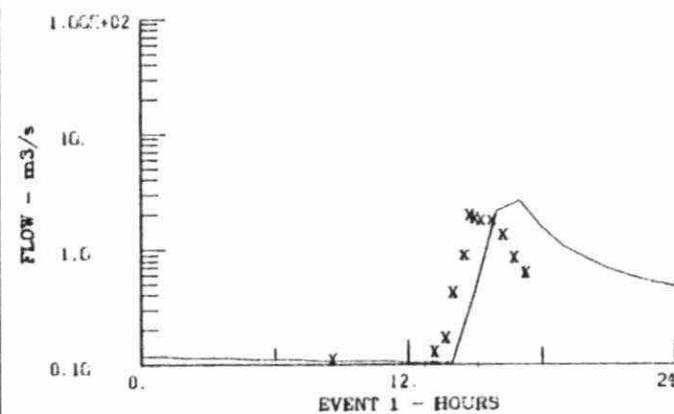
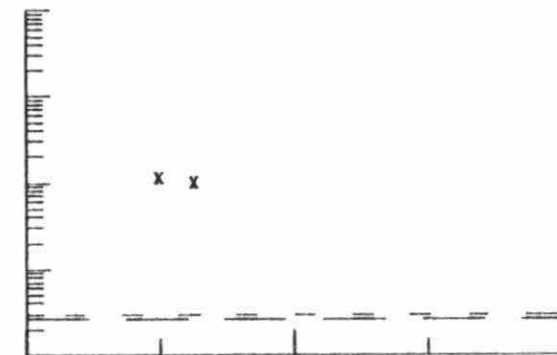
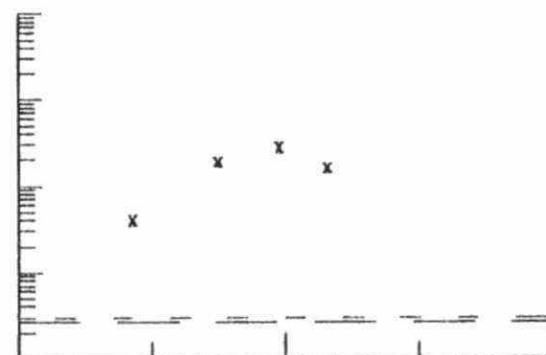
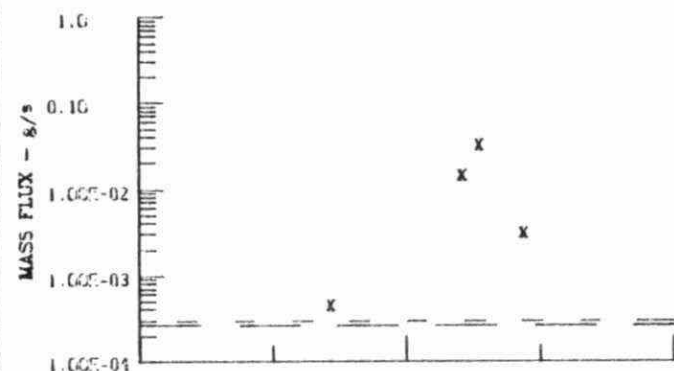
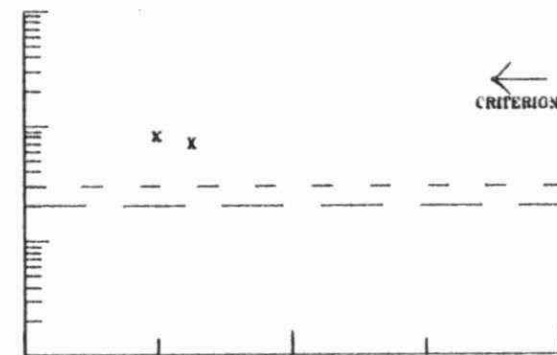
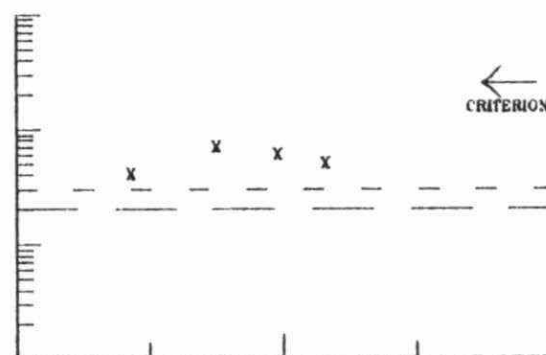
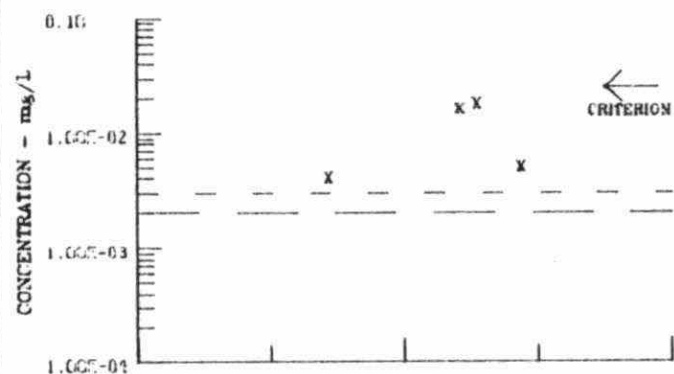
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - NICKEL



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - NICKEL

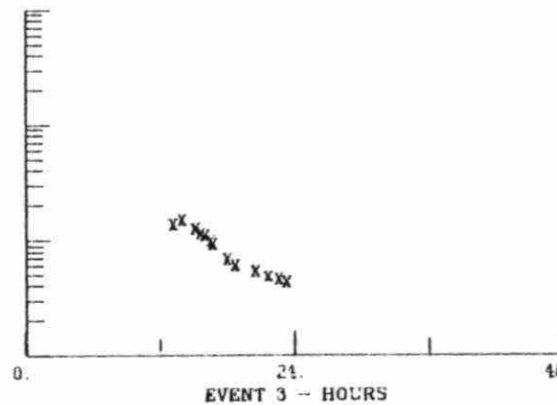
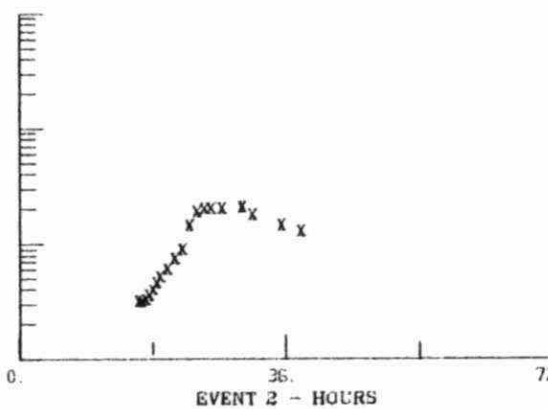
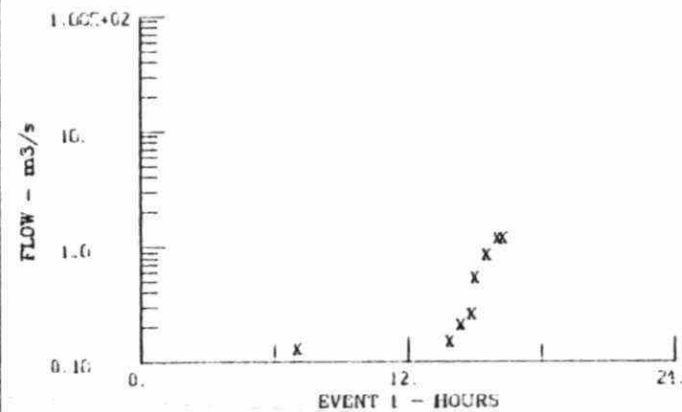
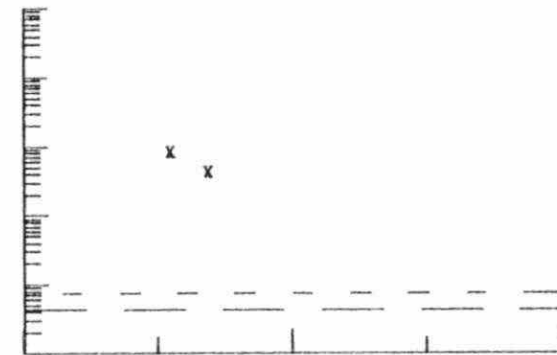
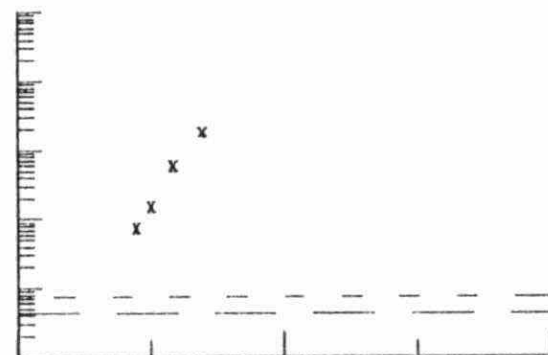
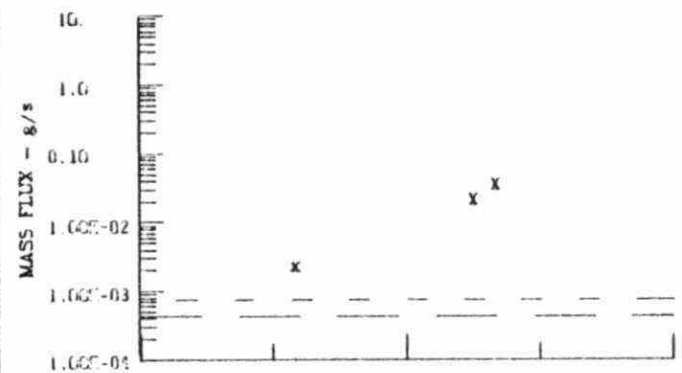
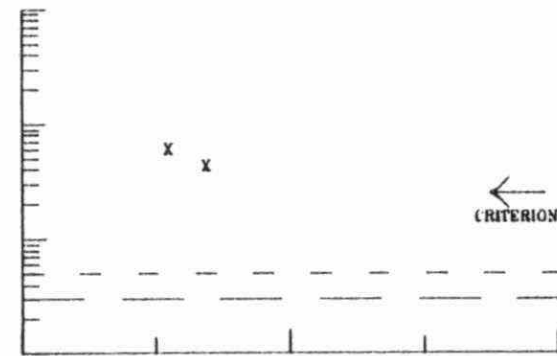
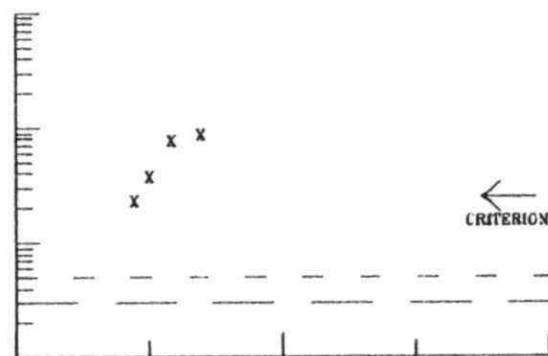
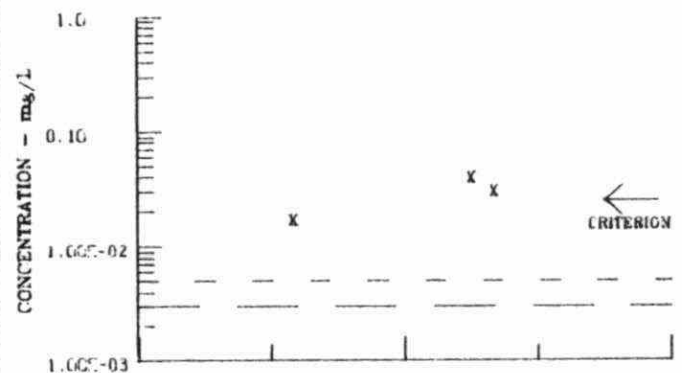


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - NICKEL

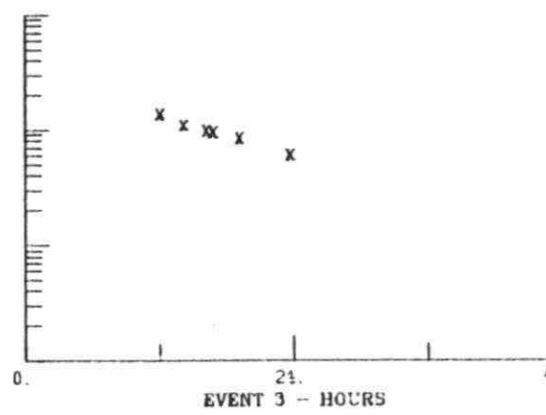
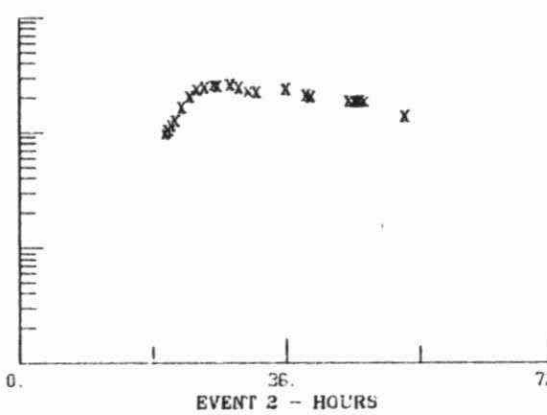
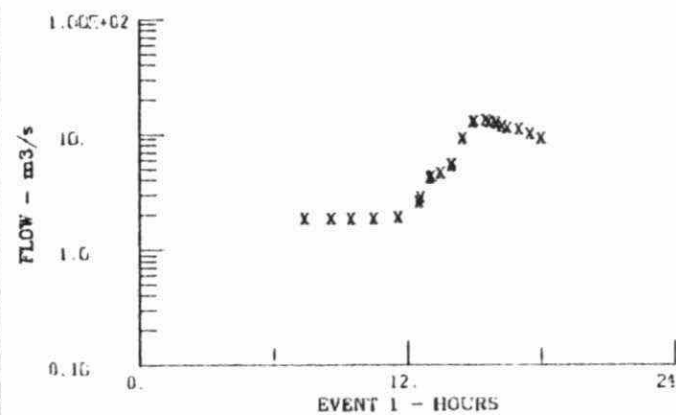
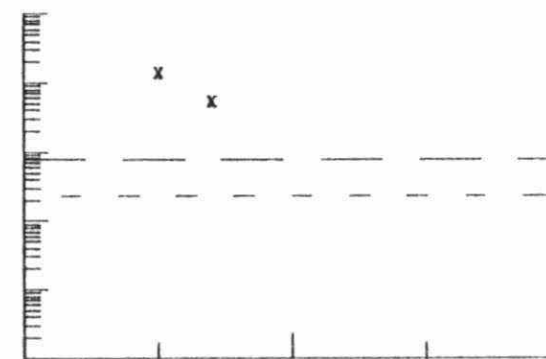
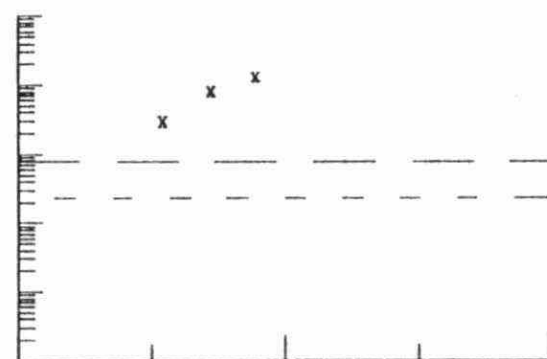
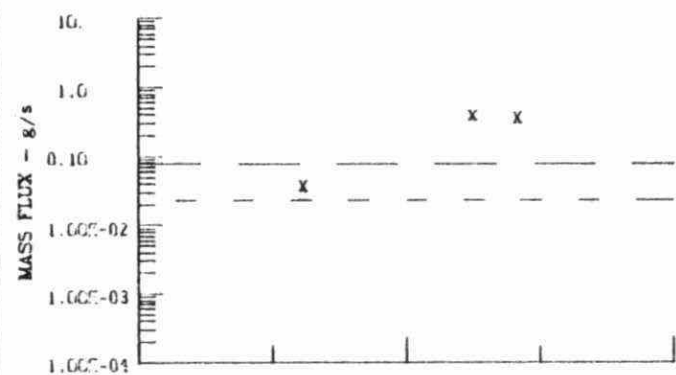
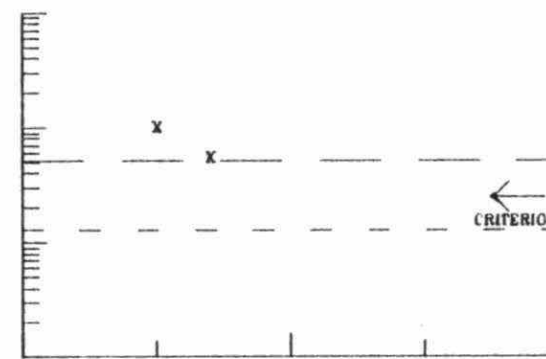
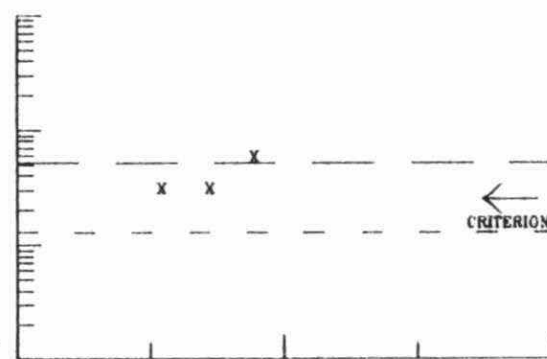
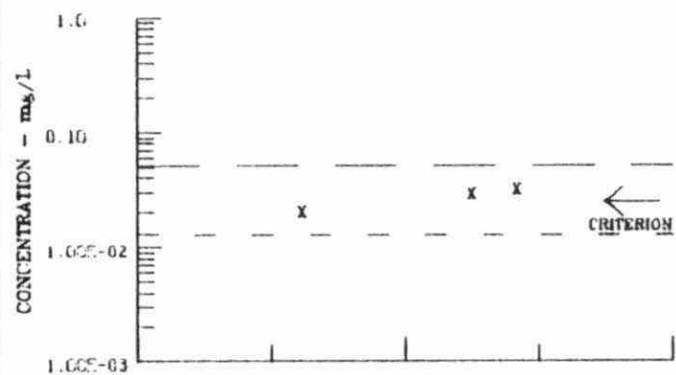


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - NICKEL

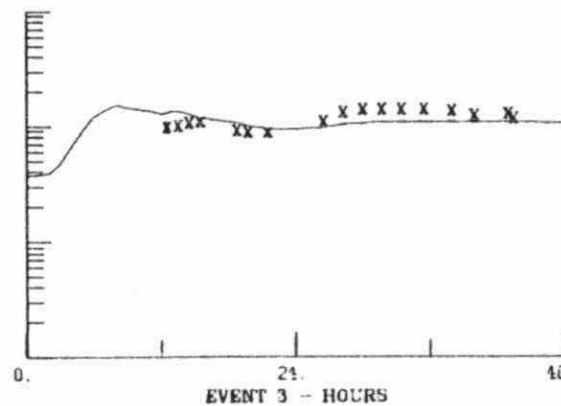
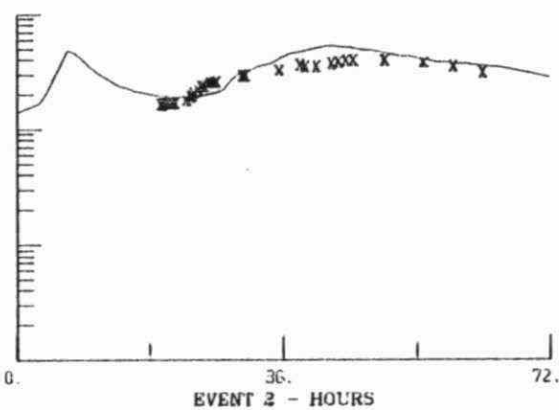
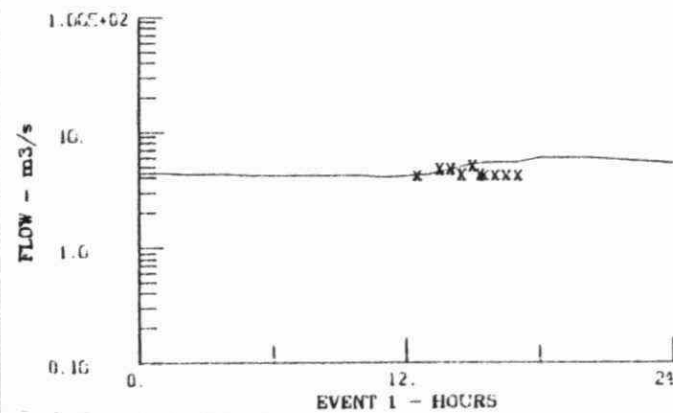
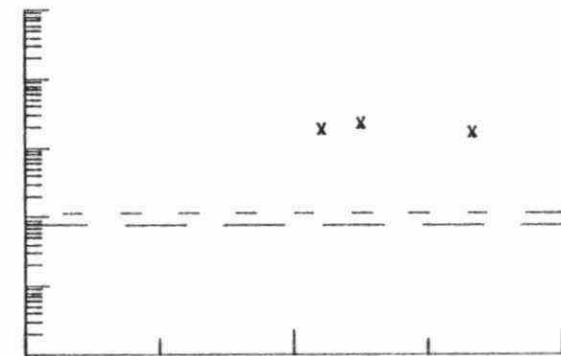
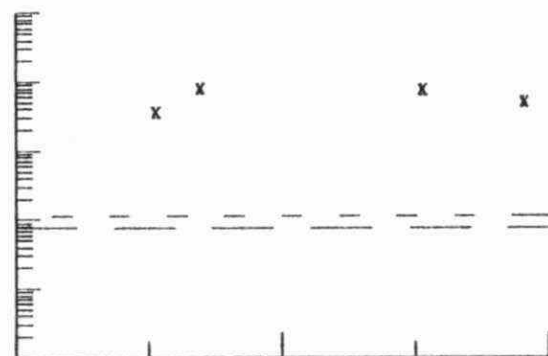
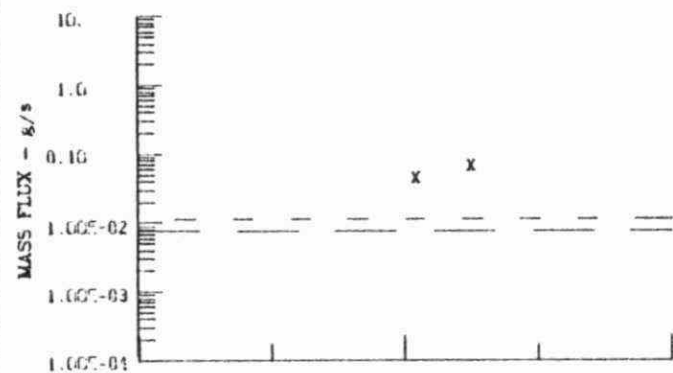
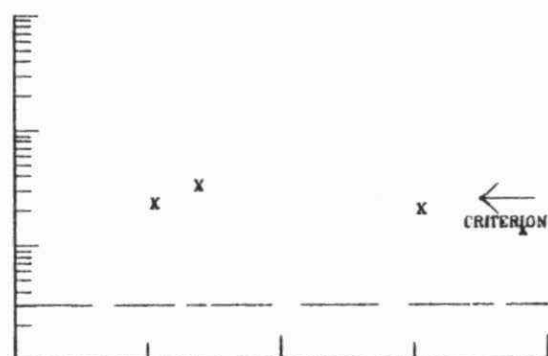
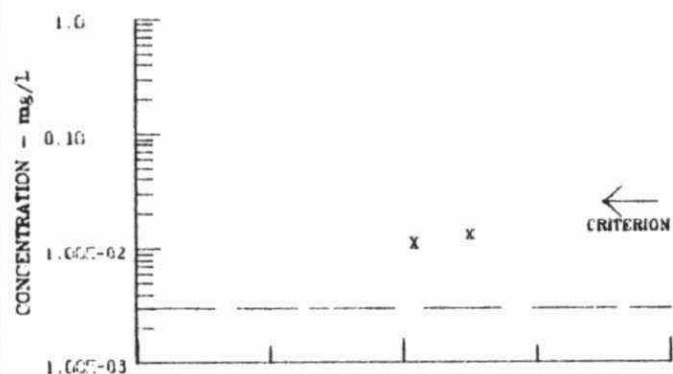
LEAD



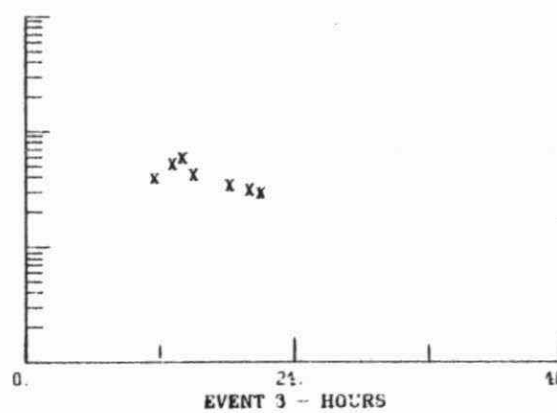
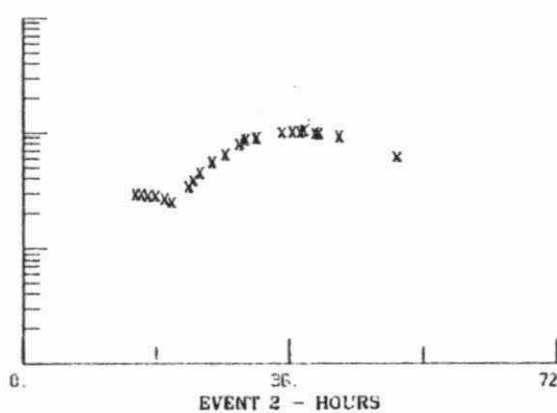
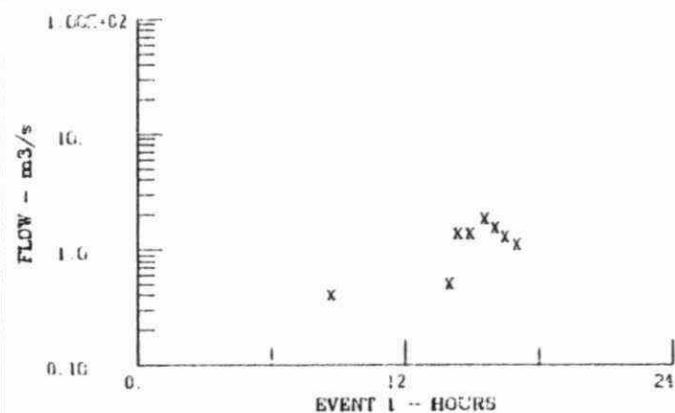
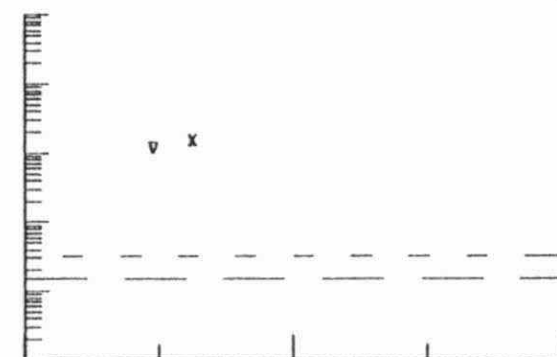
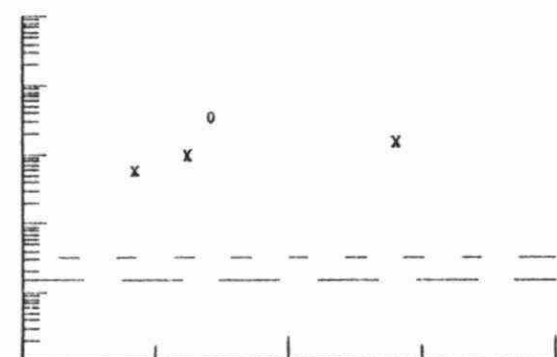
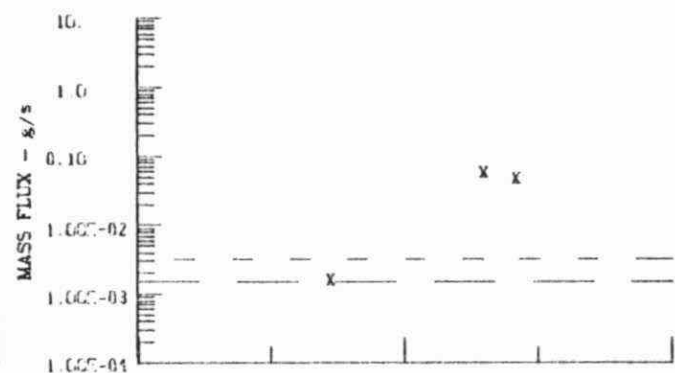
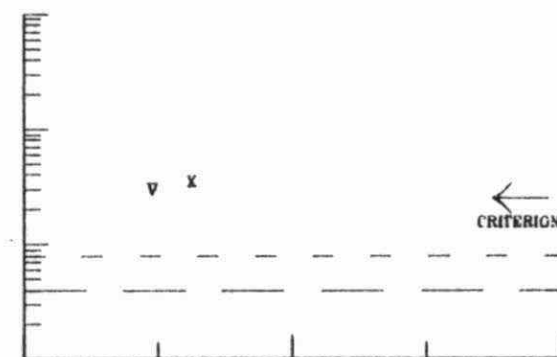
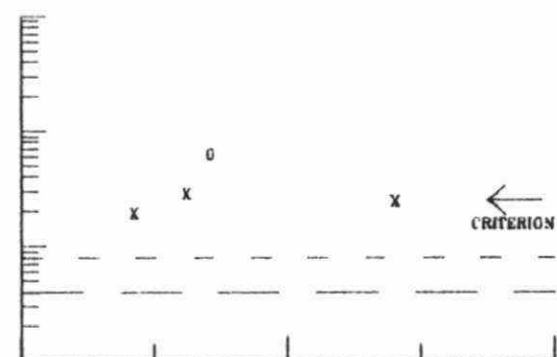
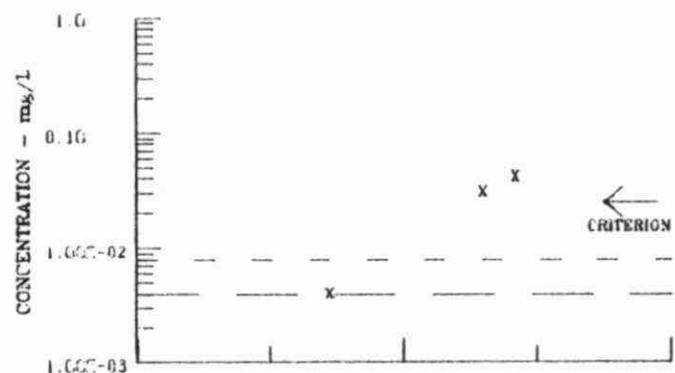
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - LEAD



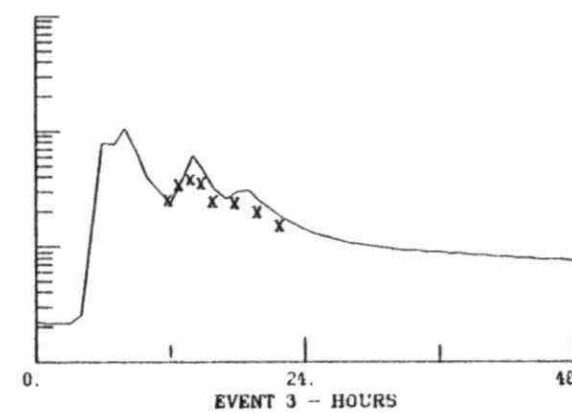
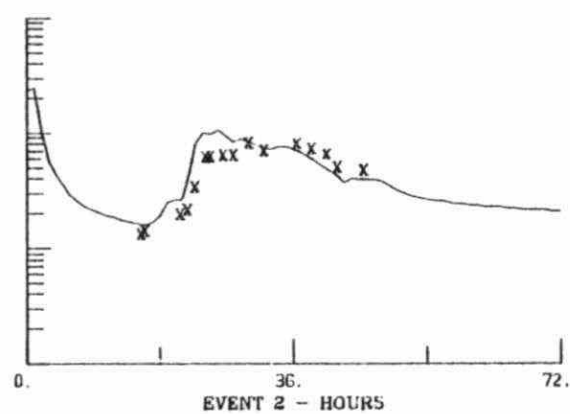
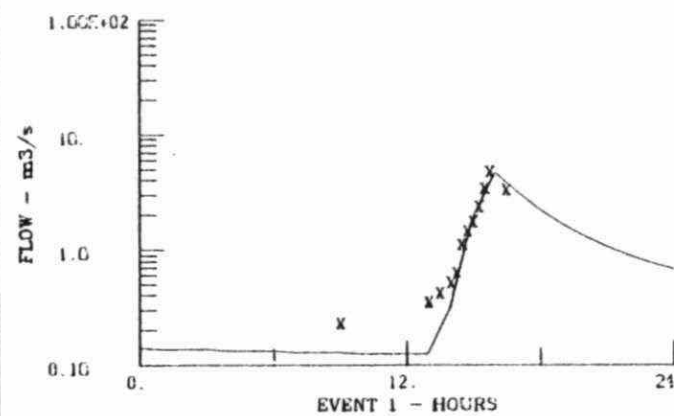
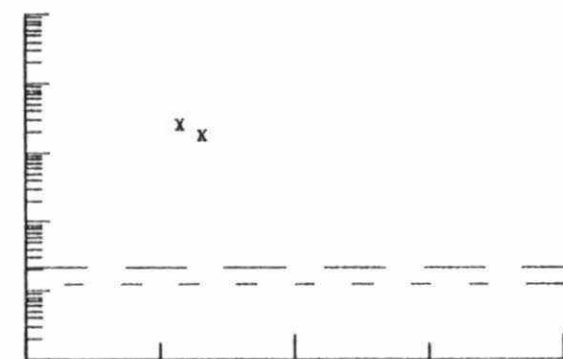
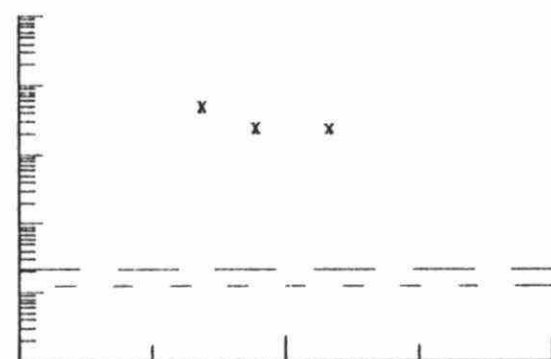
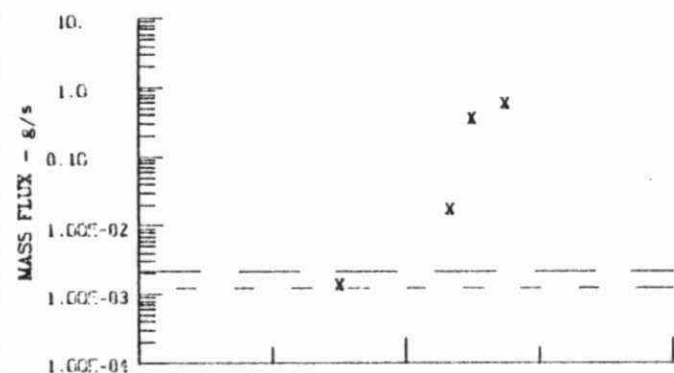
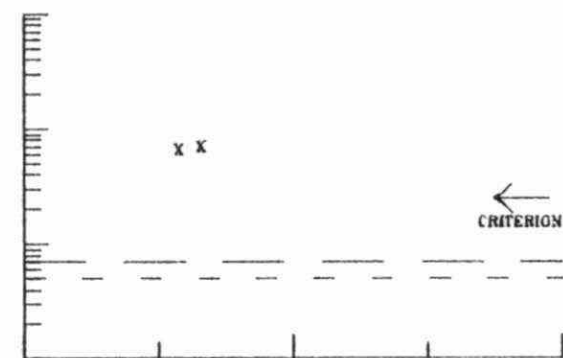
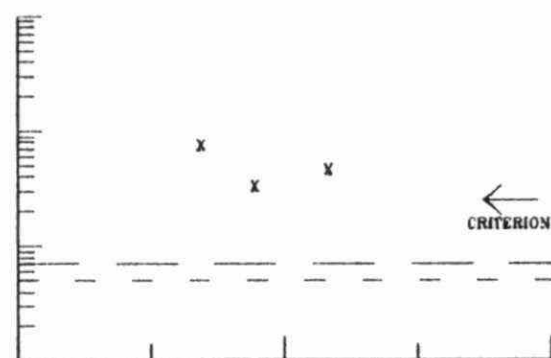
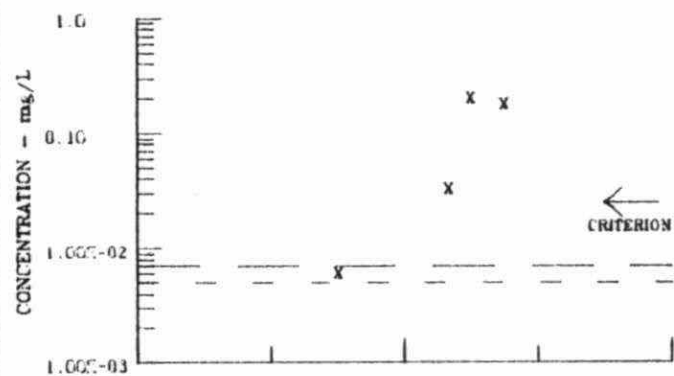
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 2 - LEAD



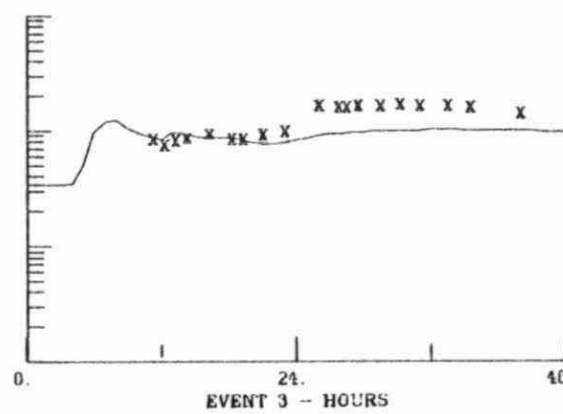
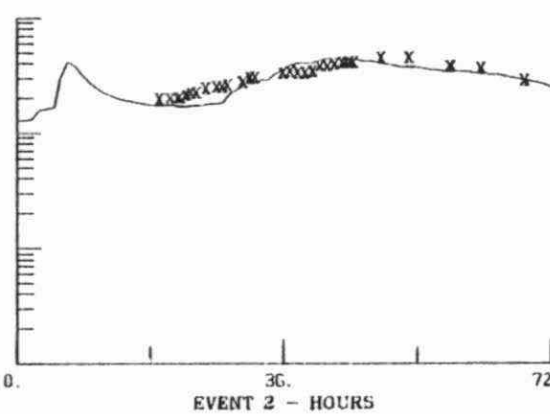
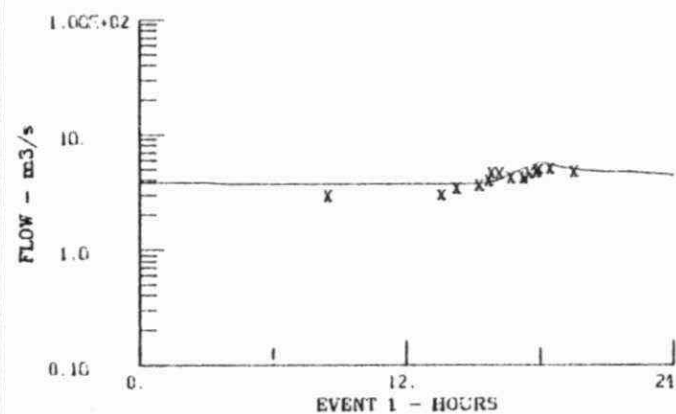
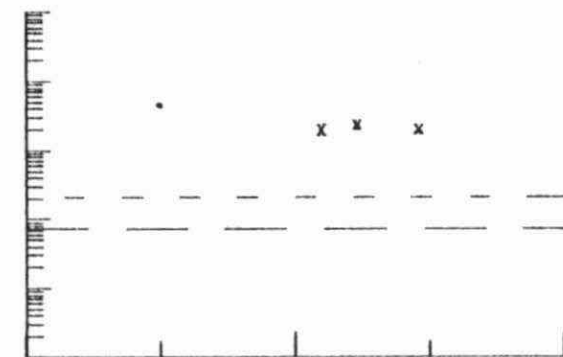
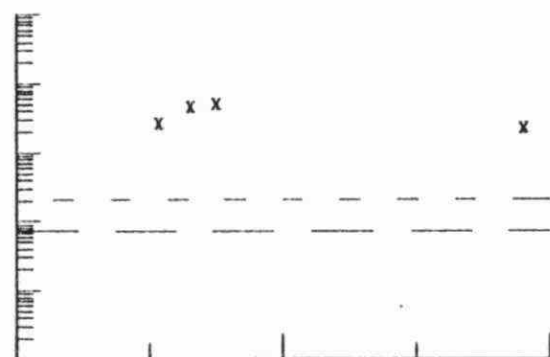
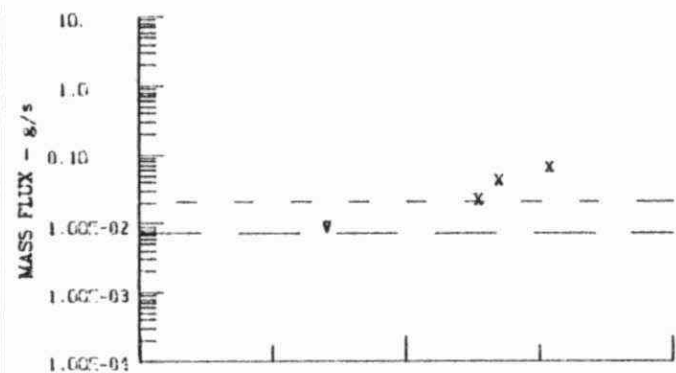
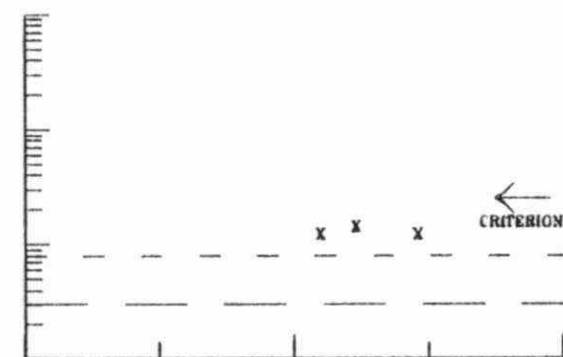
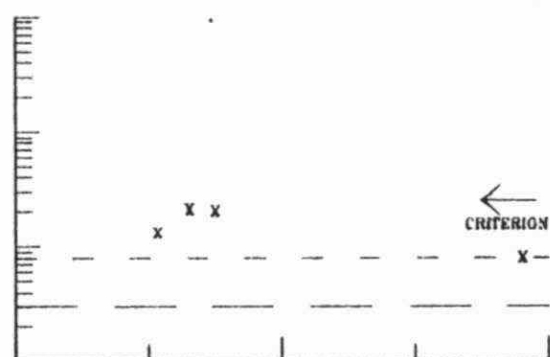
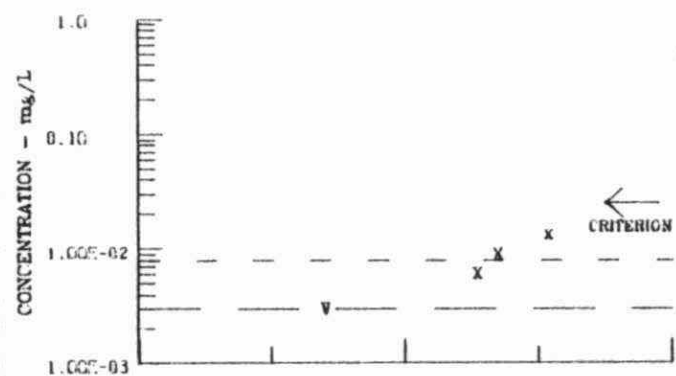
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 3 - LEAD



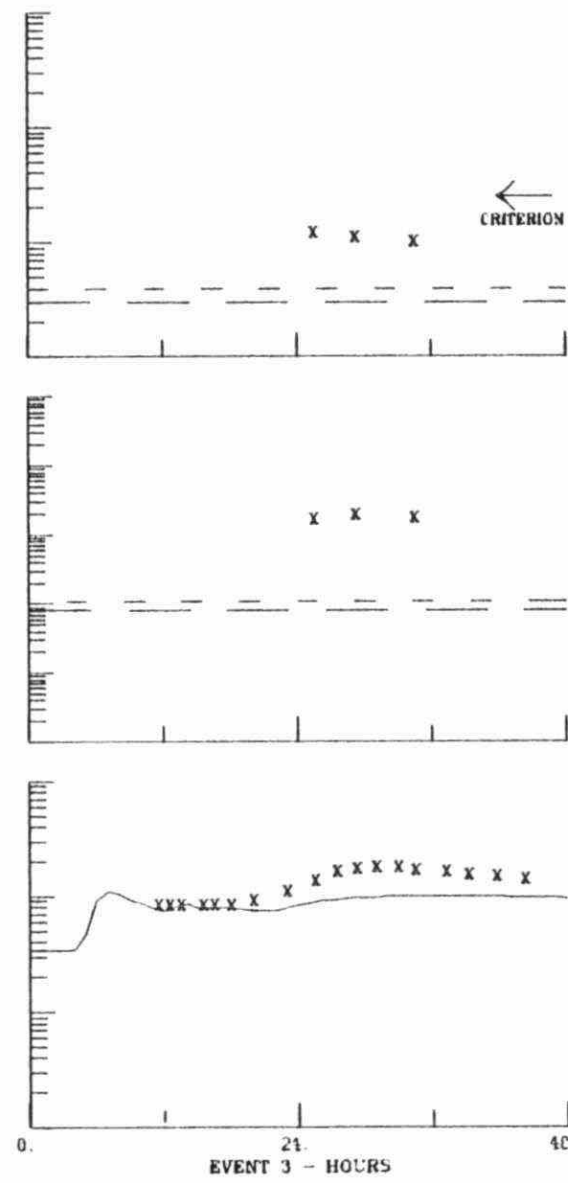
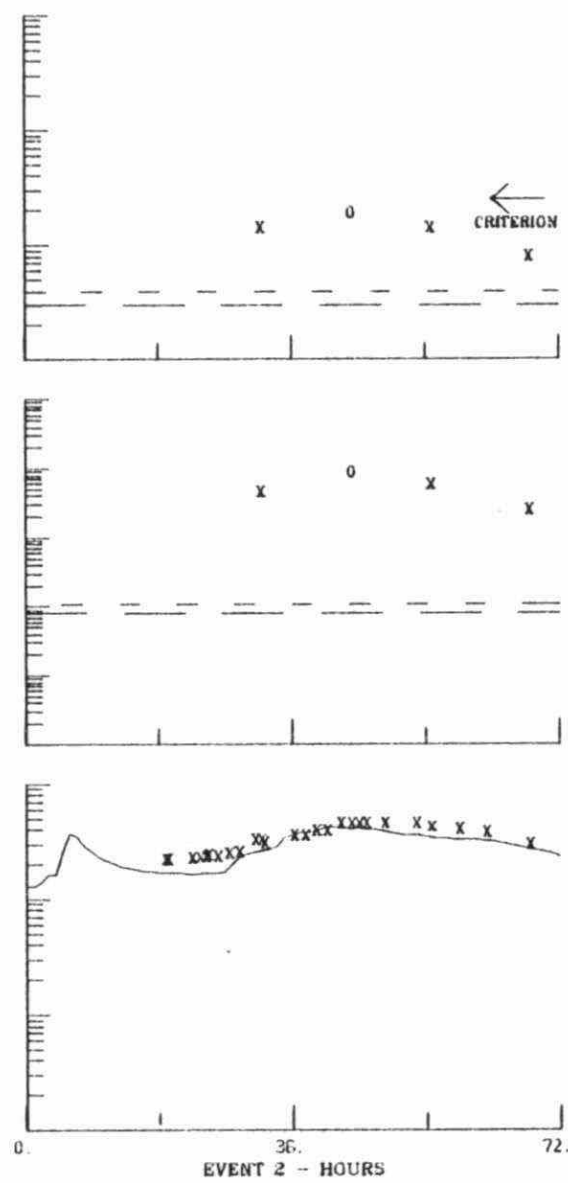
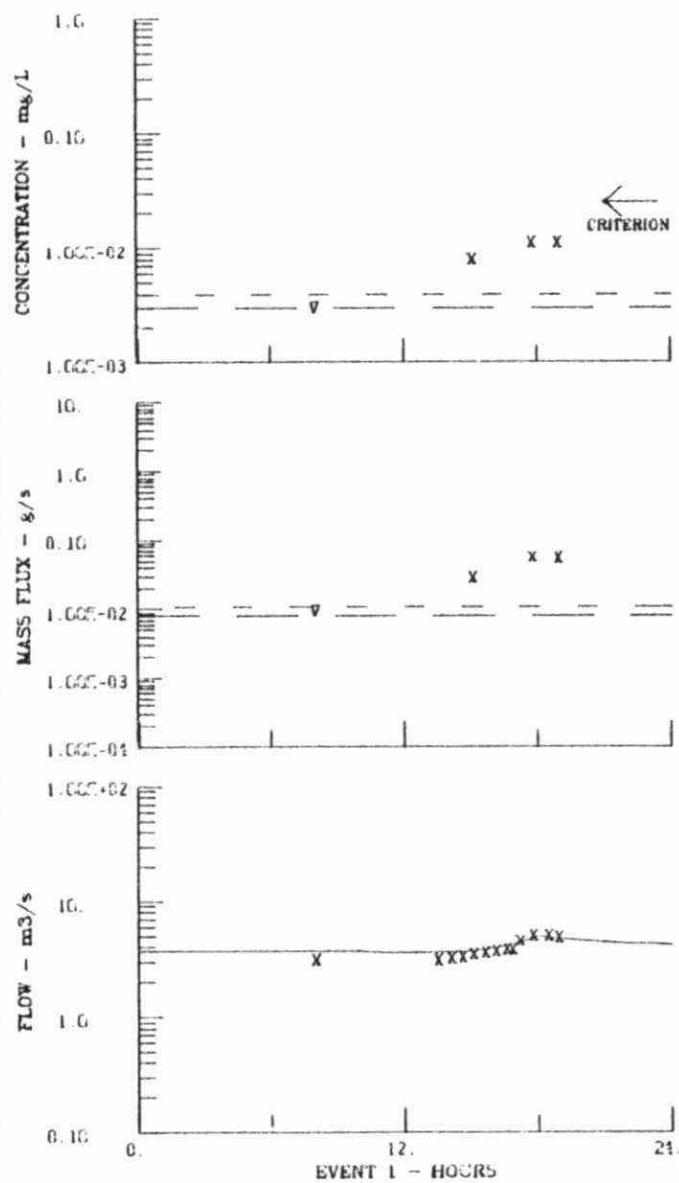
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 4 - LEAD



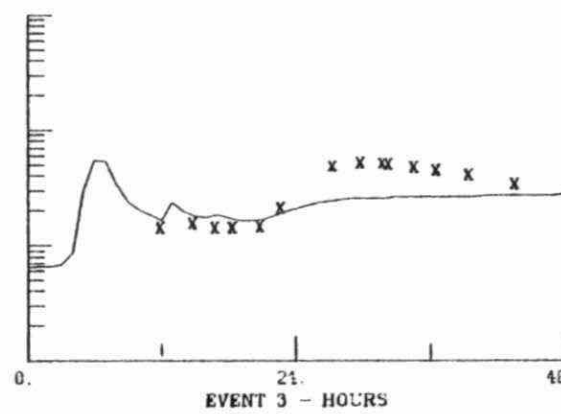
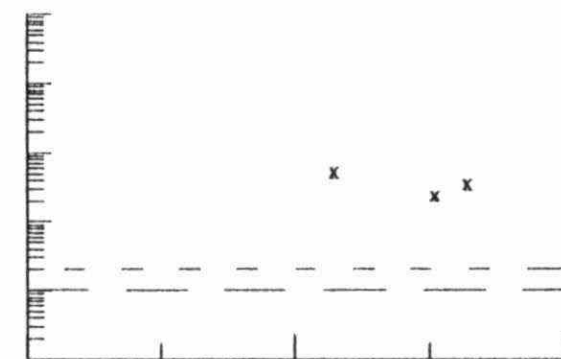
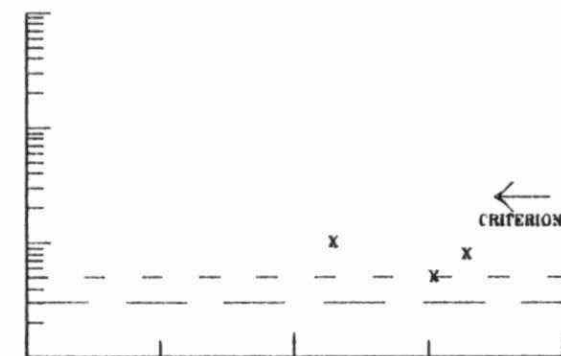
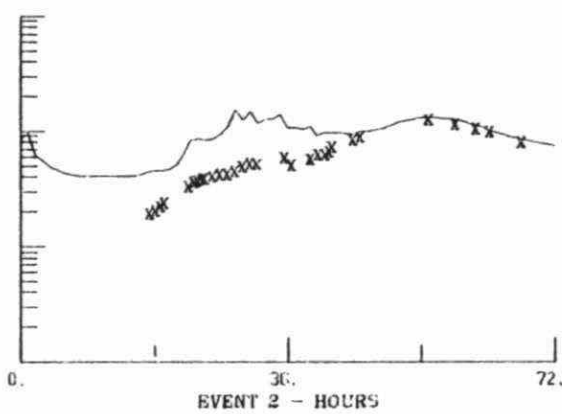
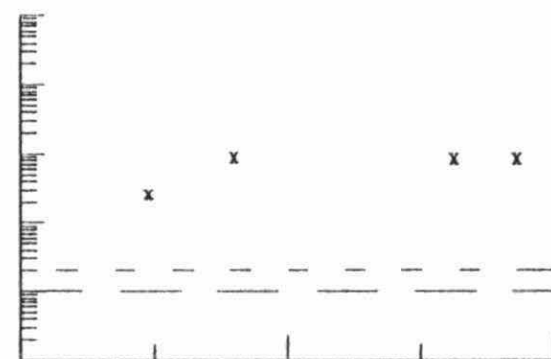
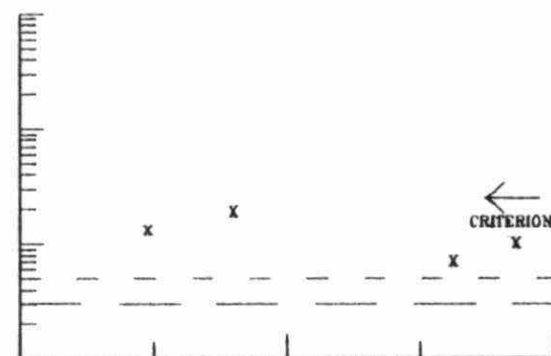
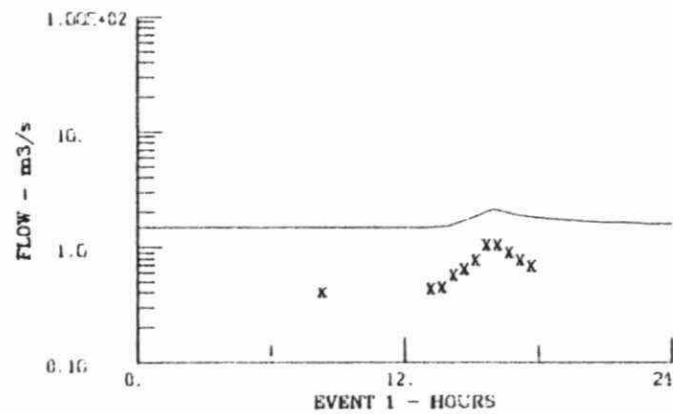
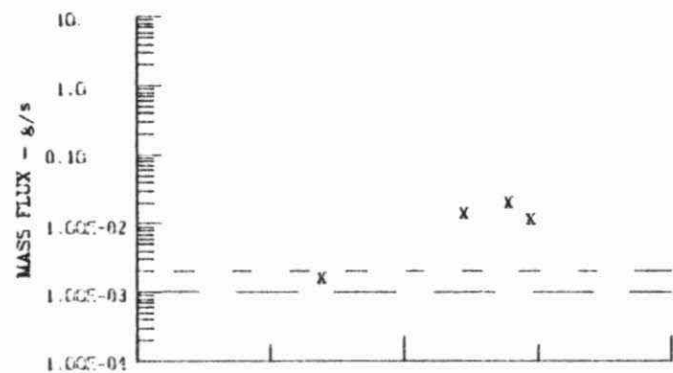
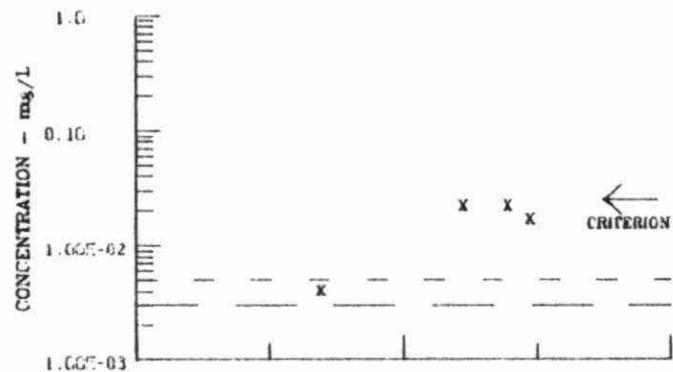
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 5 - LEAD



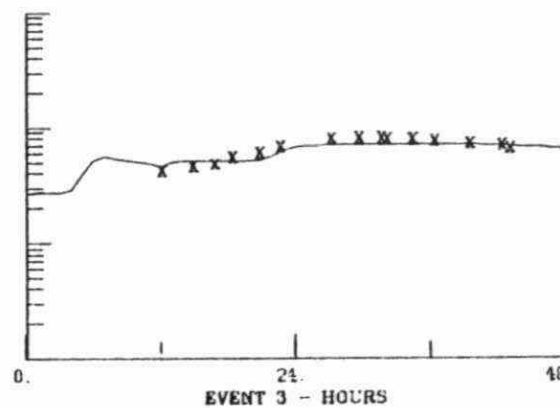
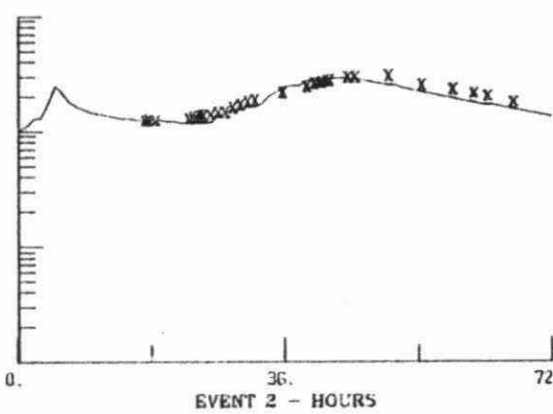
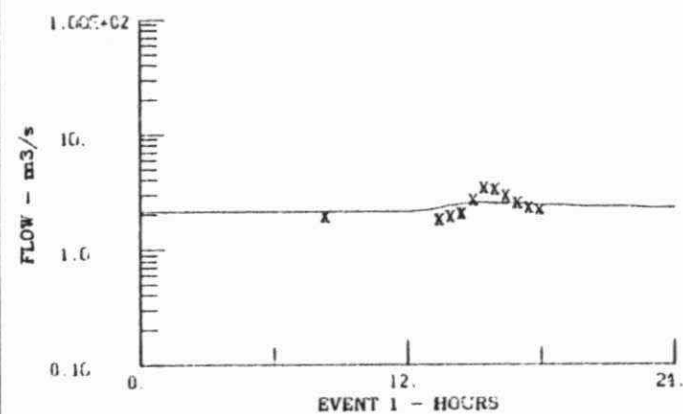
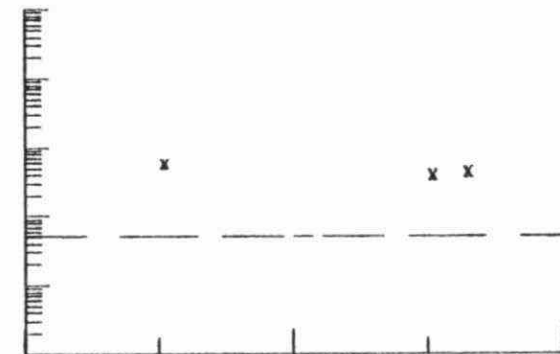
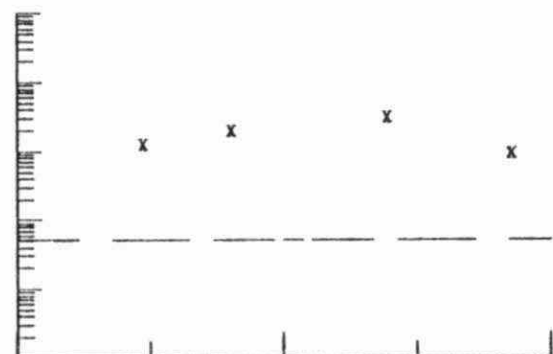
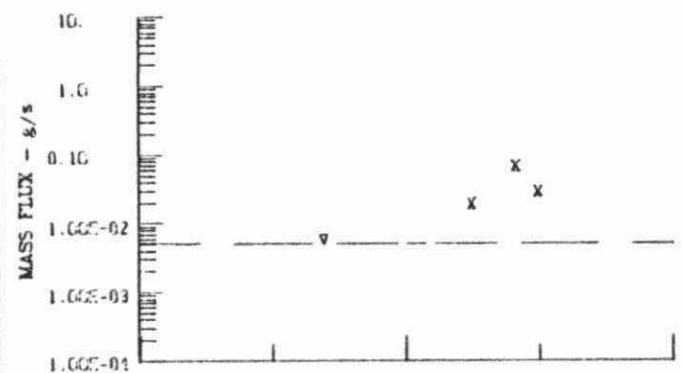
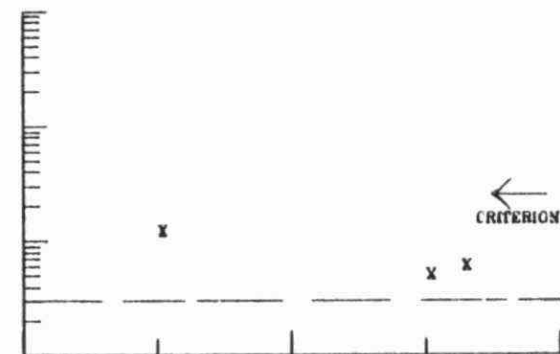
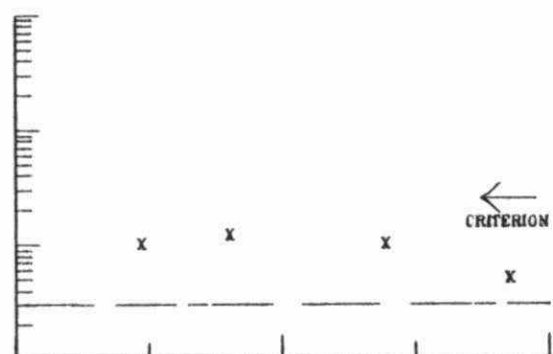
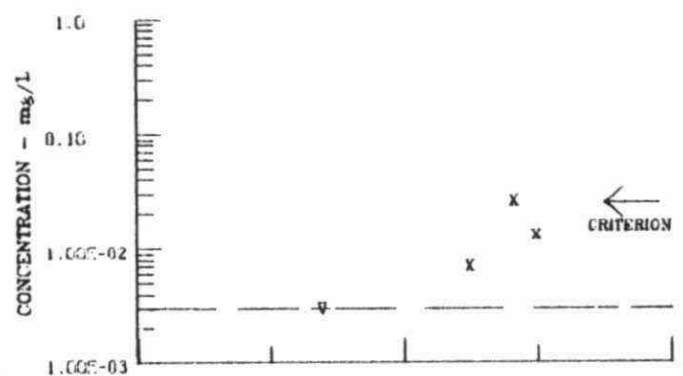
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 6 - LEAD



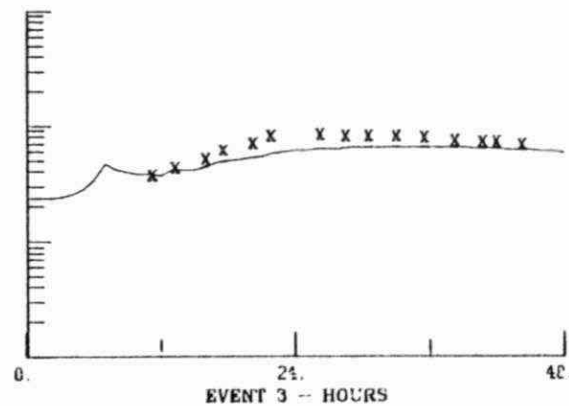
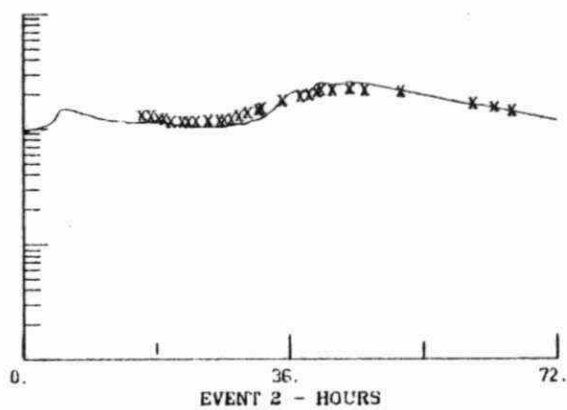
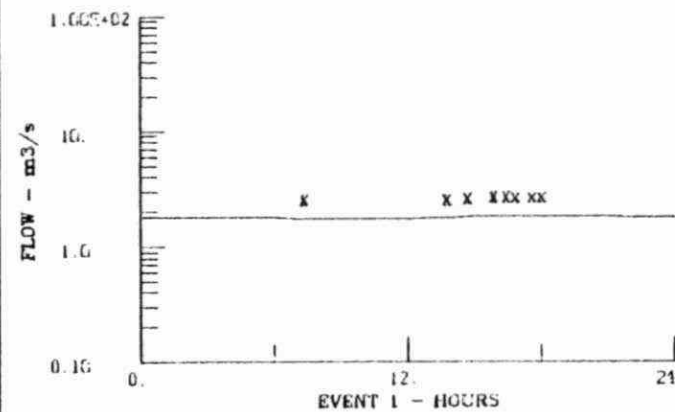
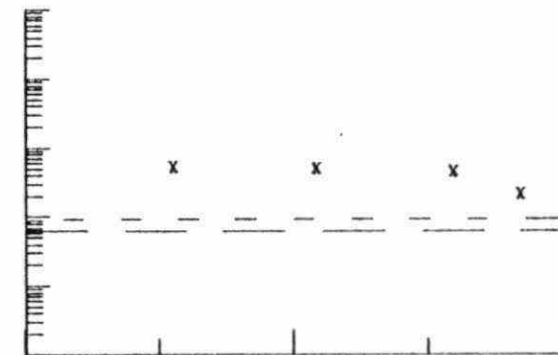
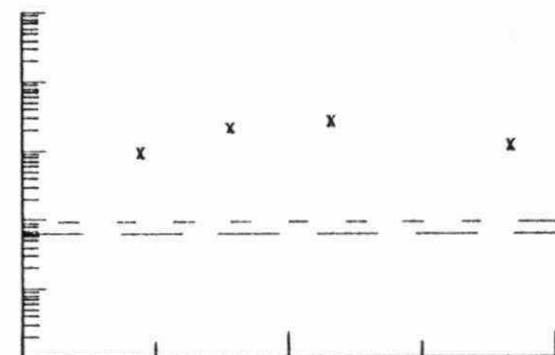
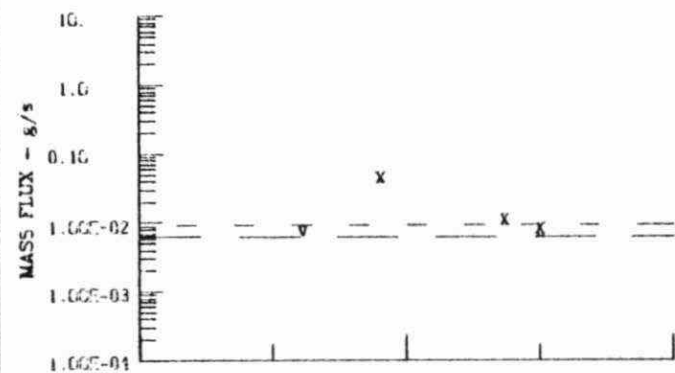
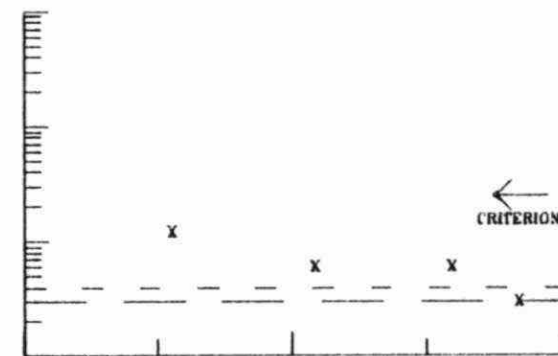
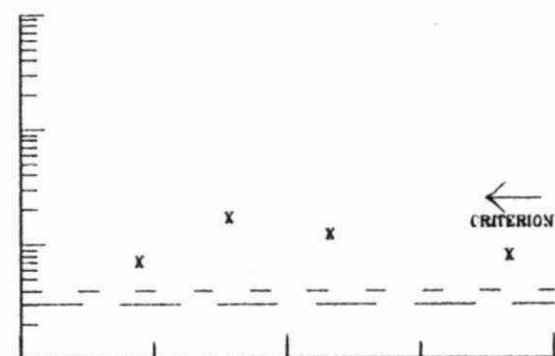
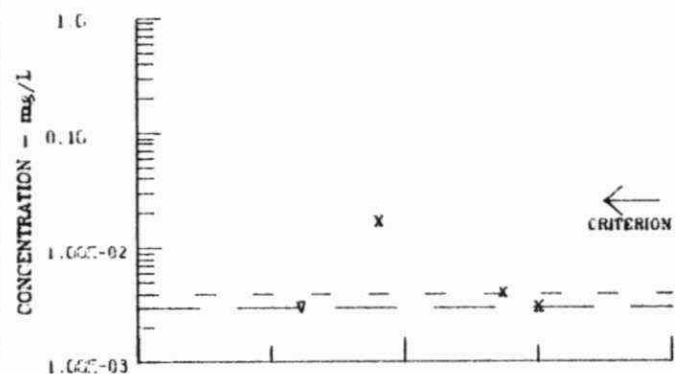
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 7 - LEAD



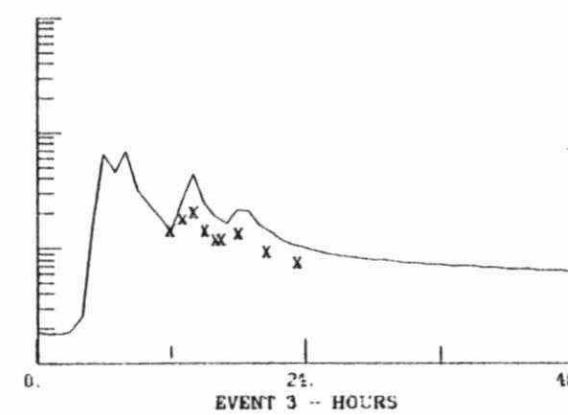
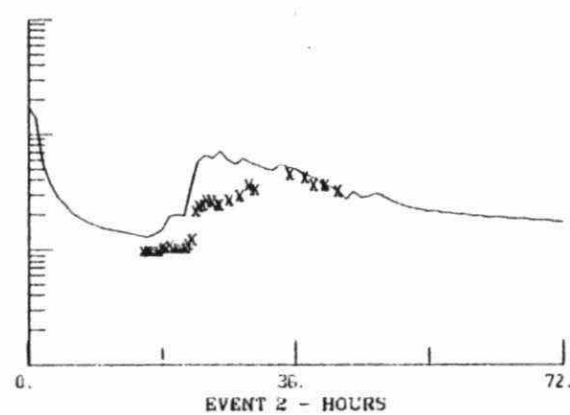
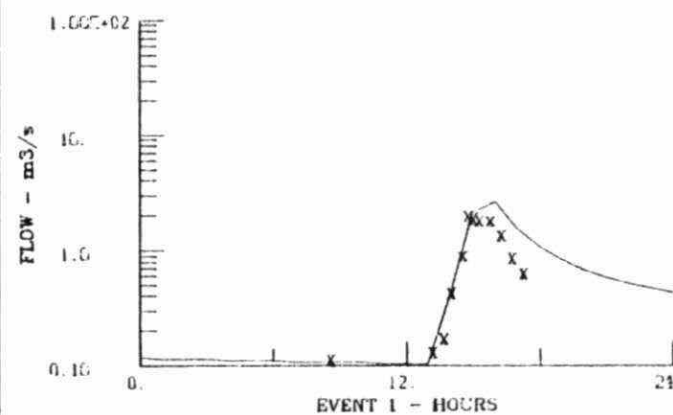
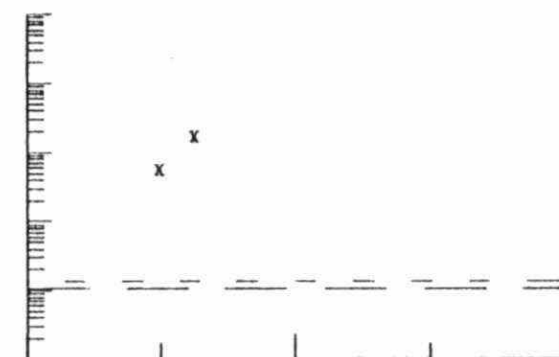
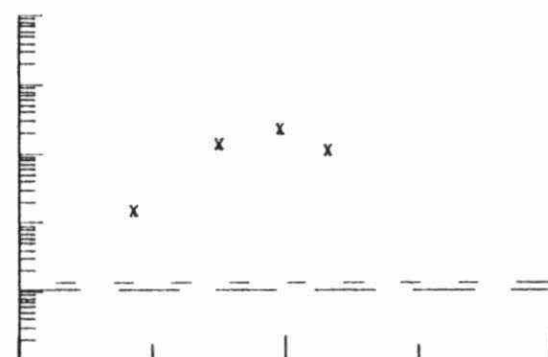
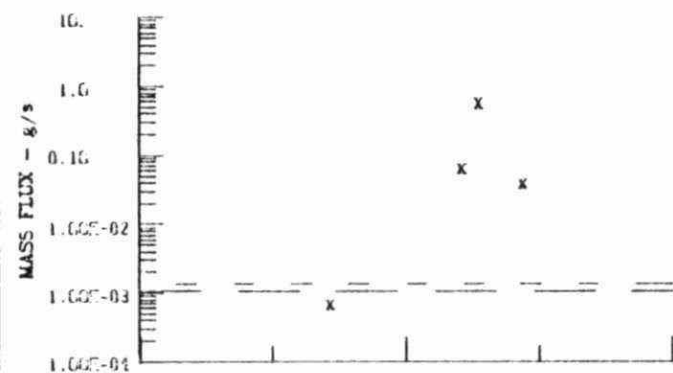
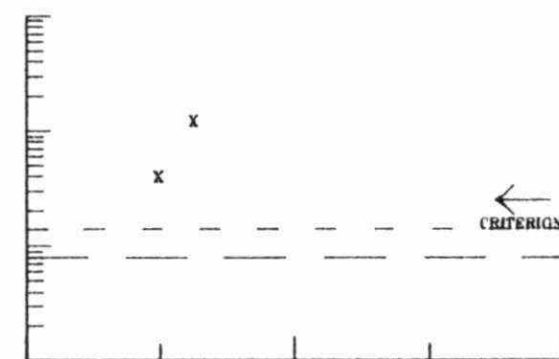
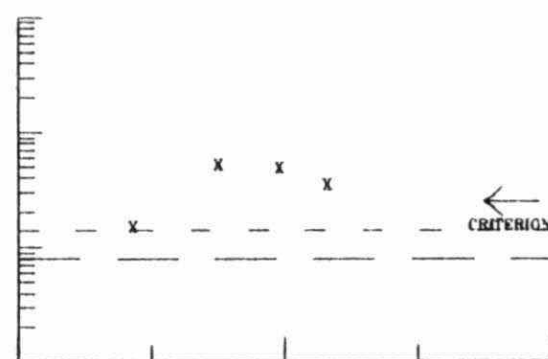
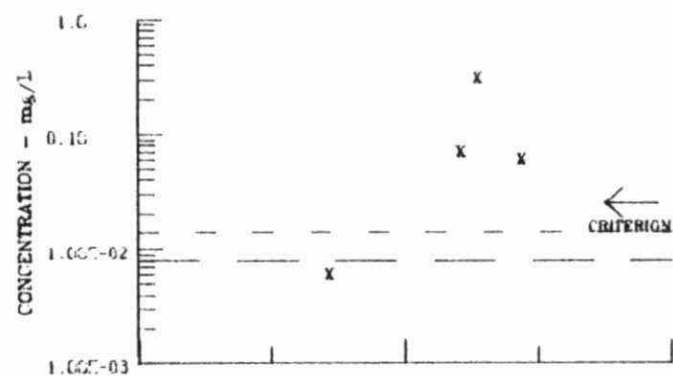
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 8 - LEAD



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - LEAD

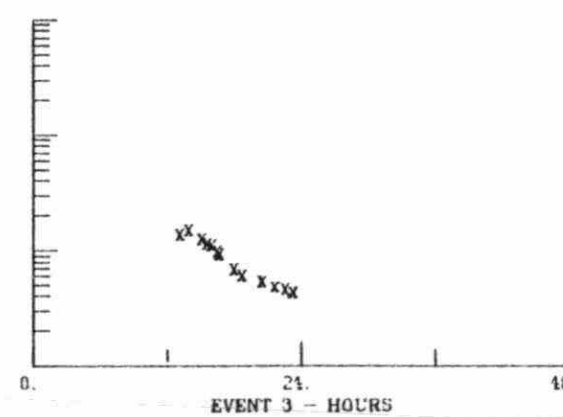
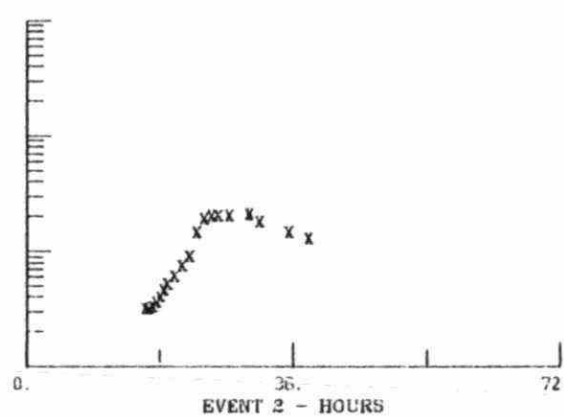
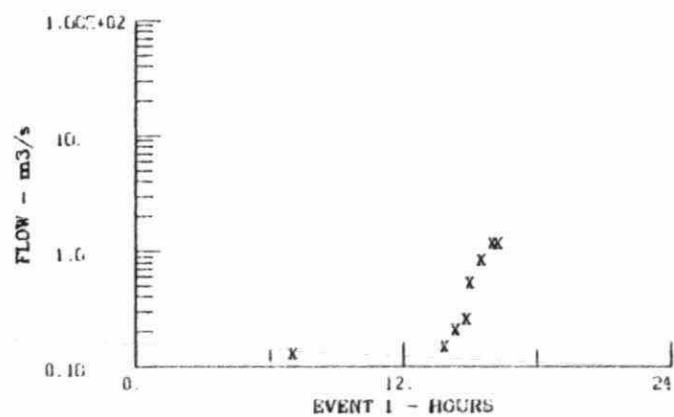
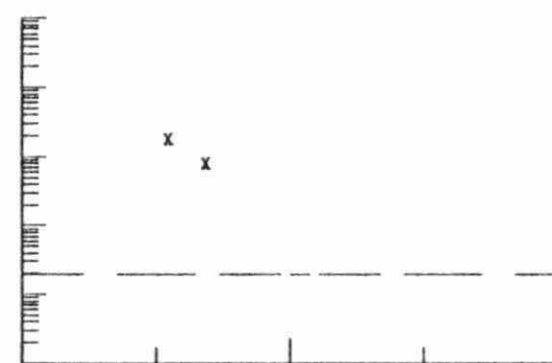
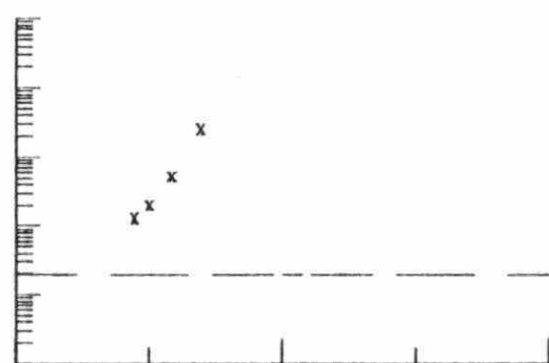
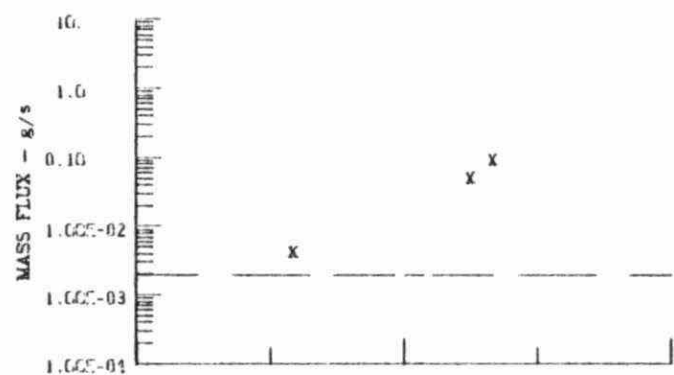
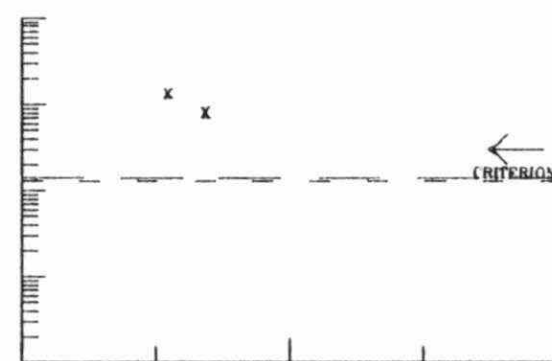
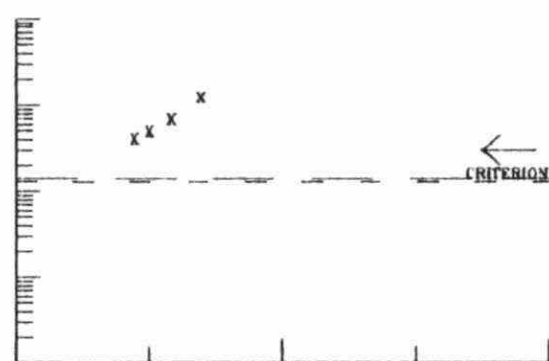
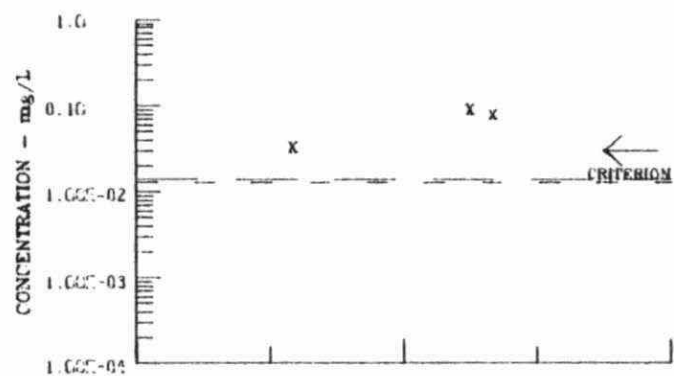


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - LEAD

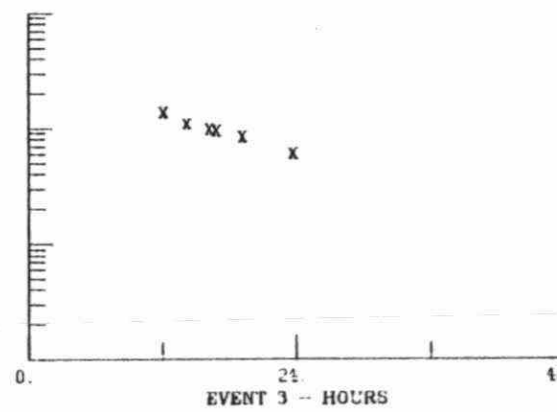
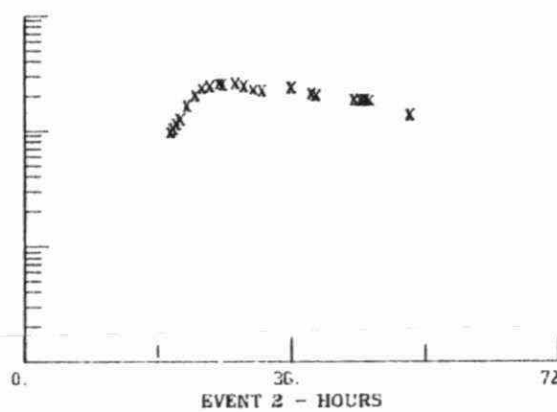
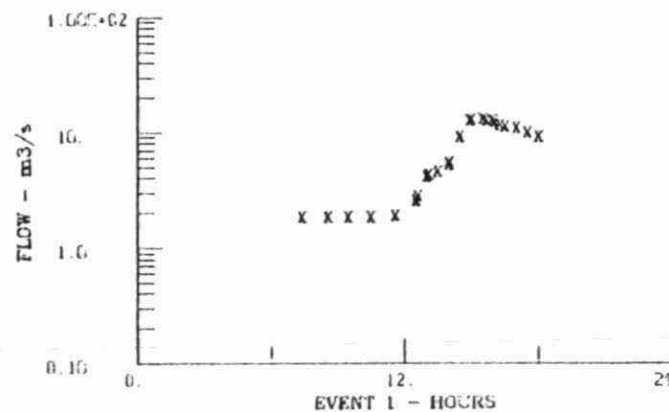
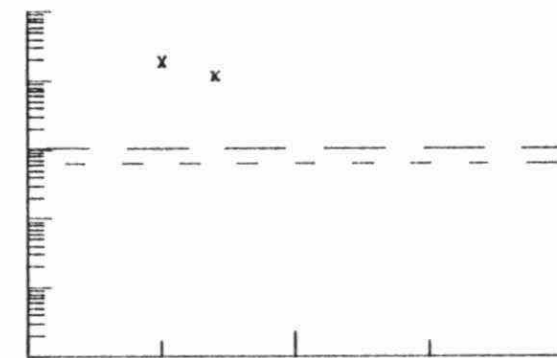
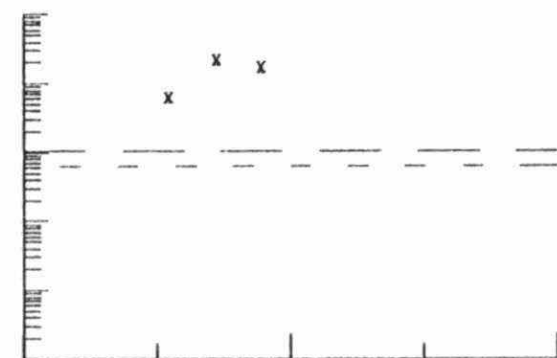
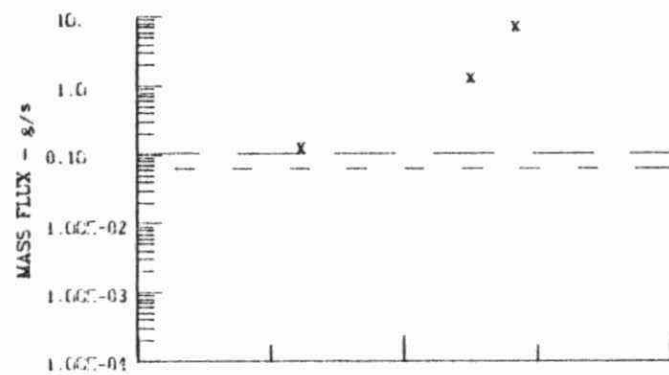
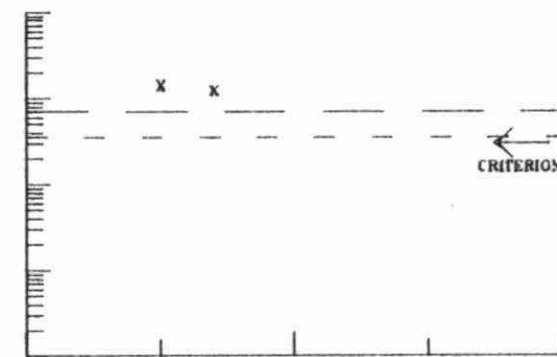
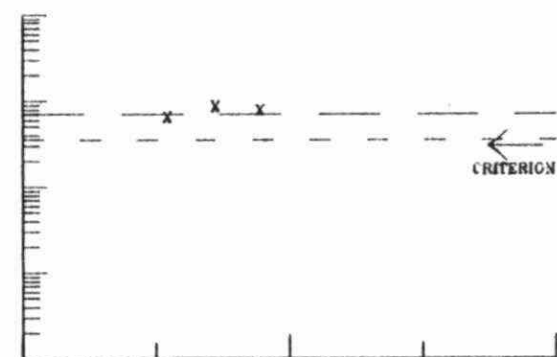
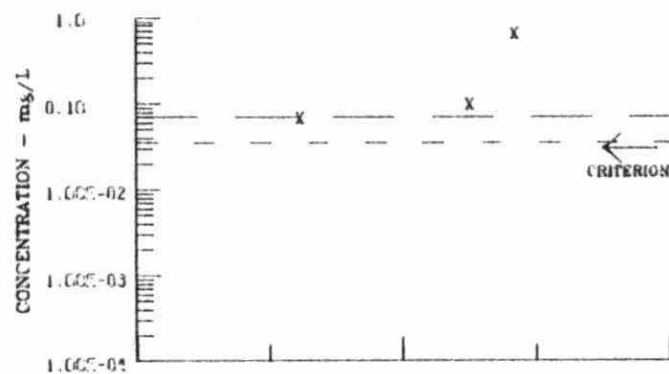


ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 11 - LEAD

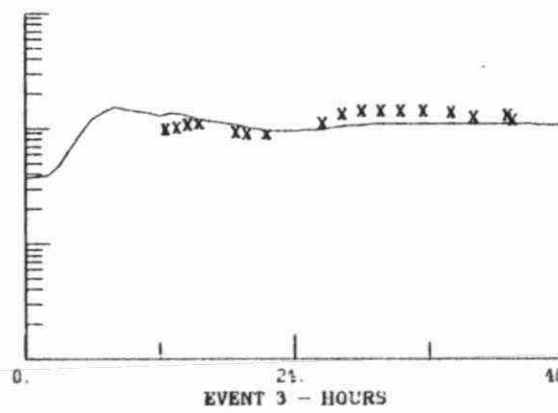
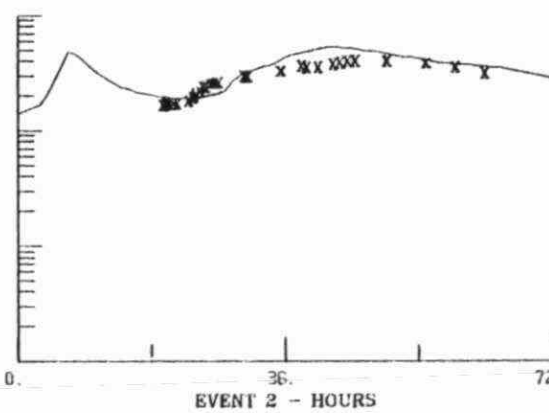
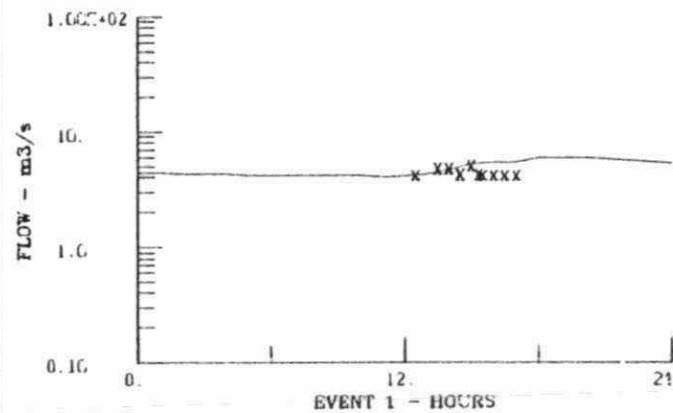
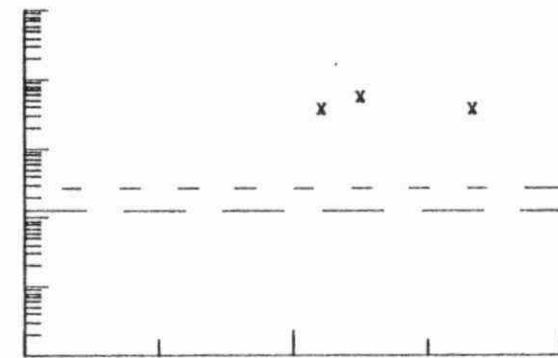
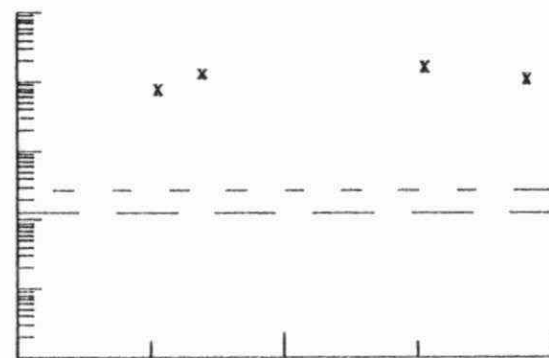
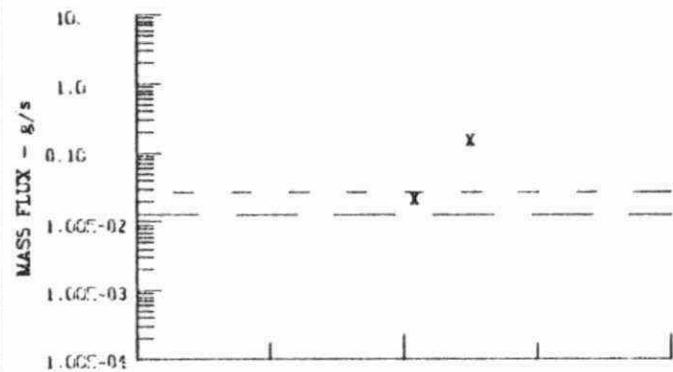
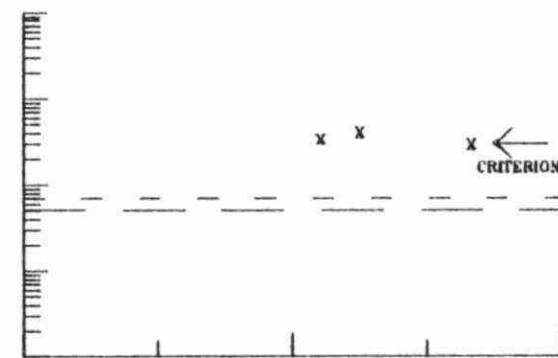
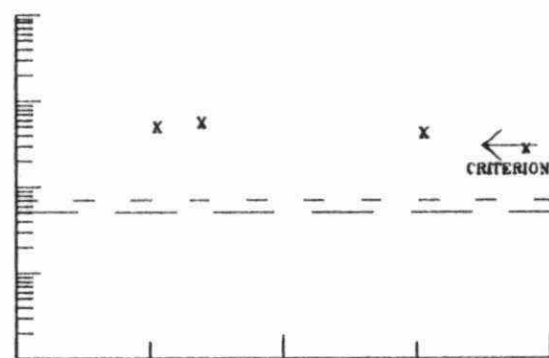
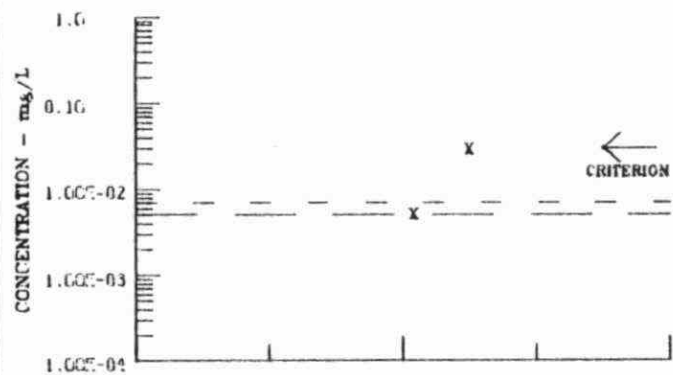
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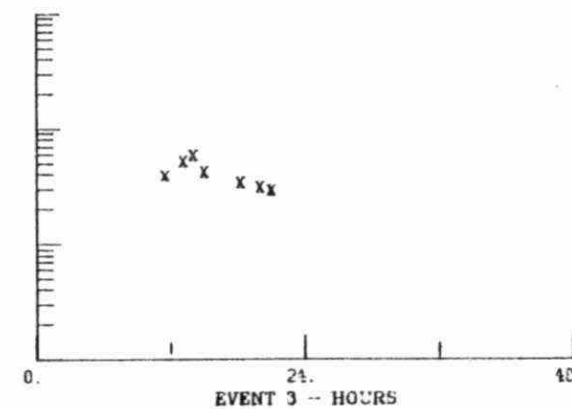
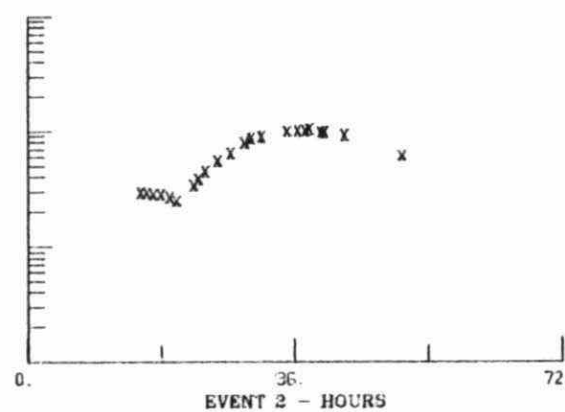
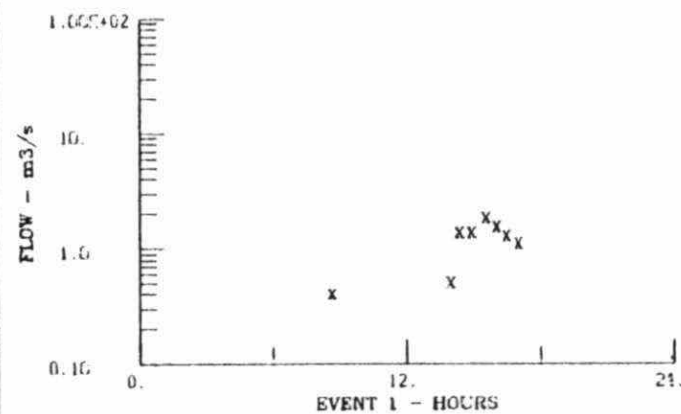
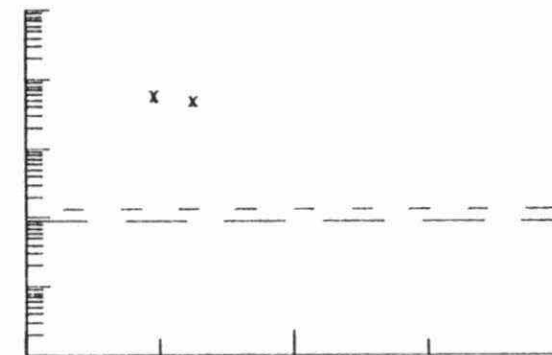
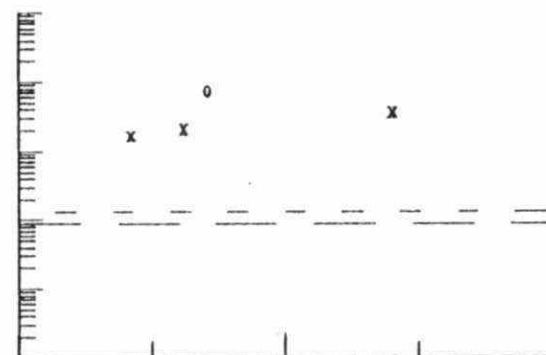
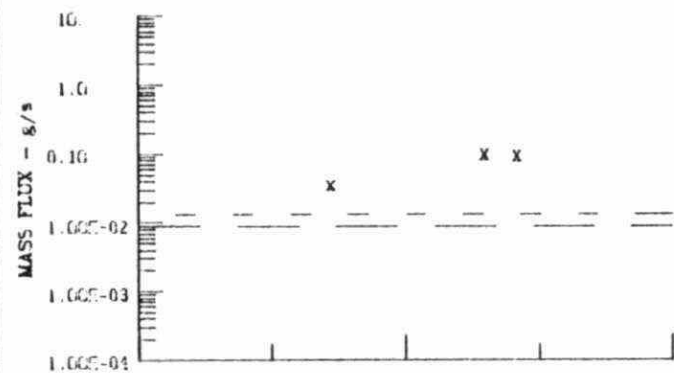
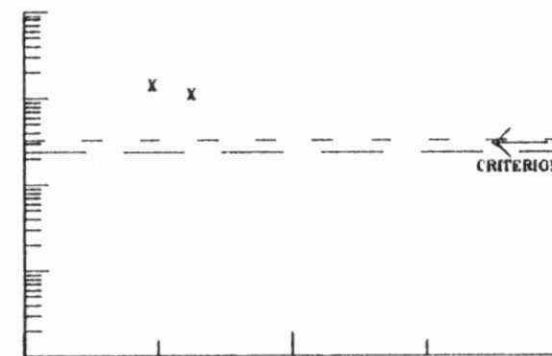
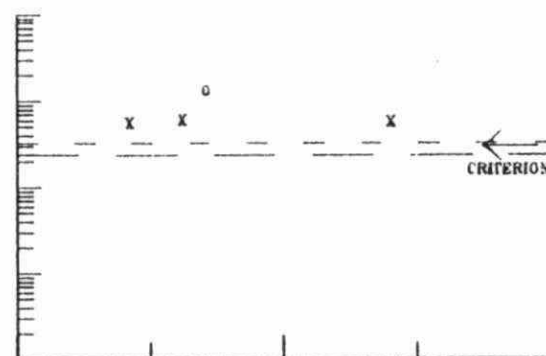
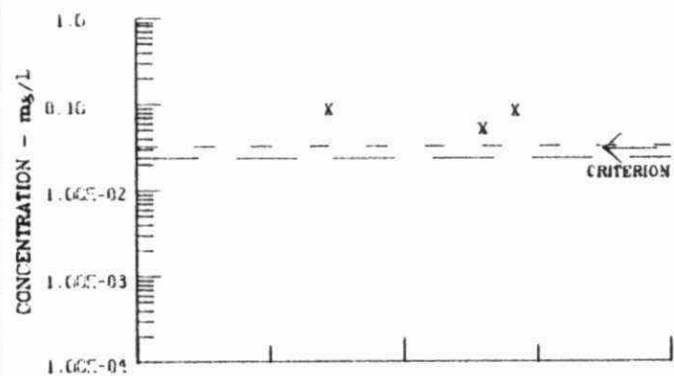
ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 1 - ZINC



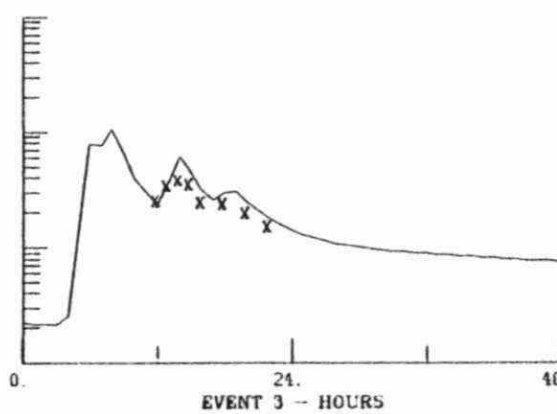
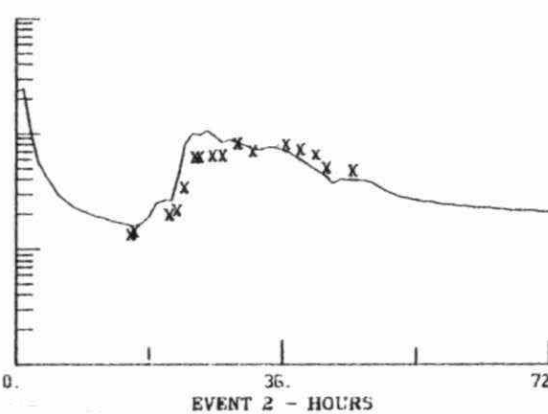
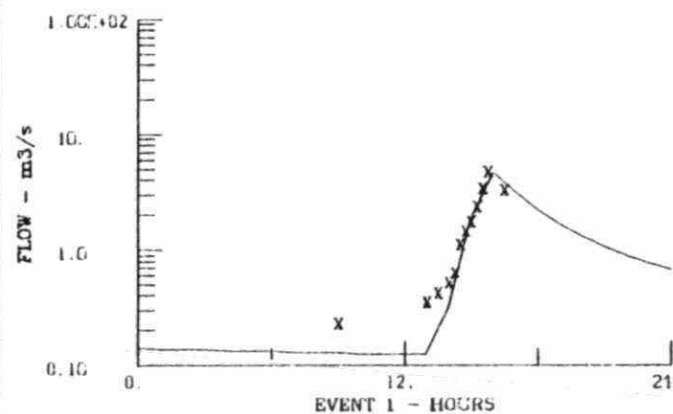
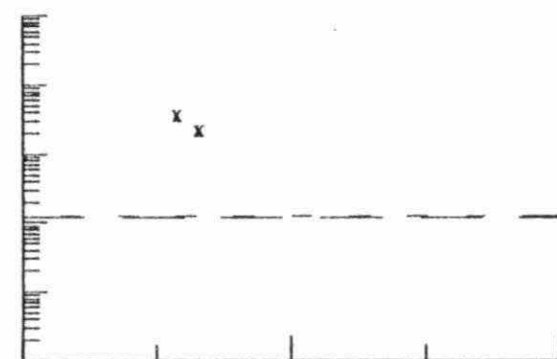
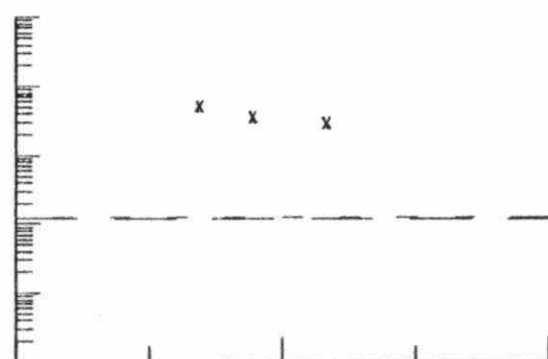
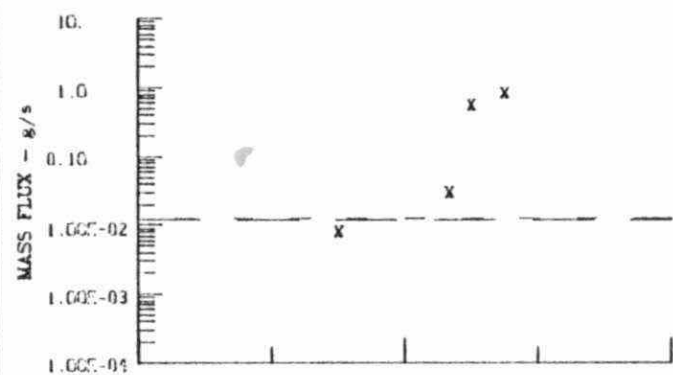
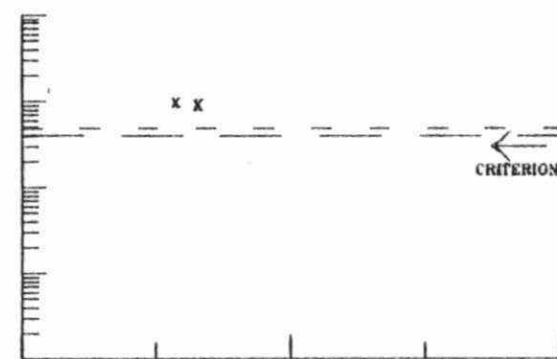
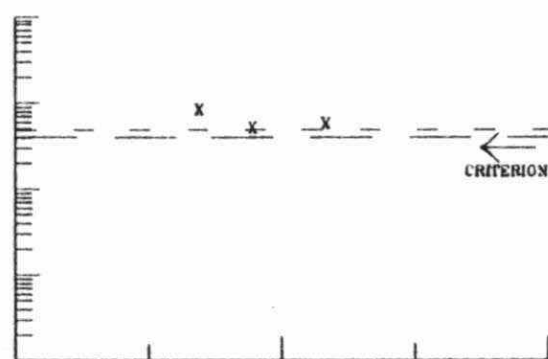
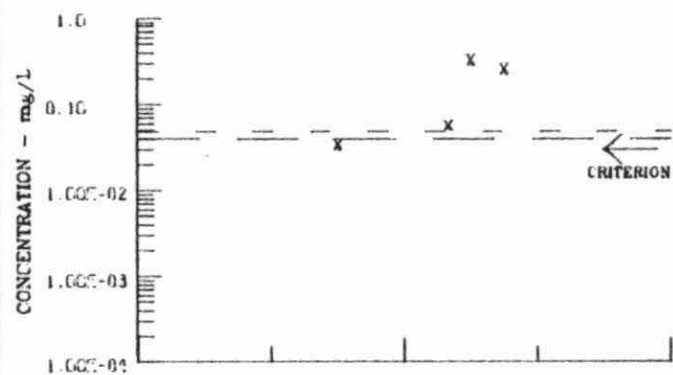
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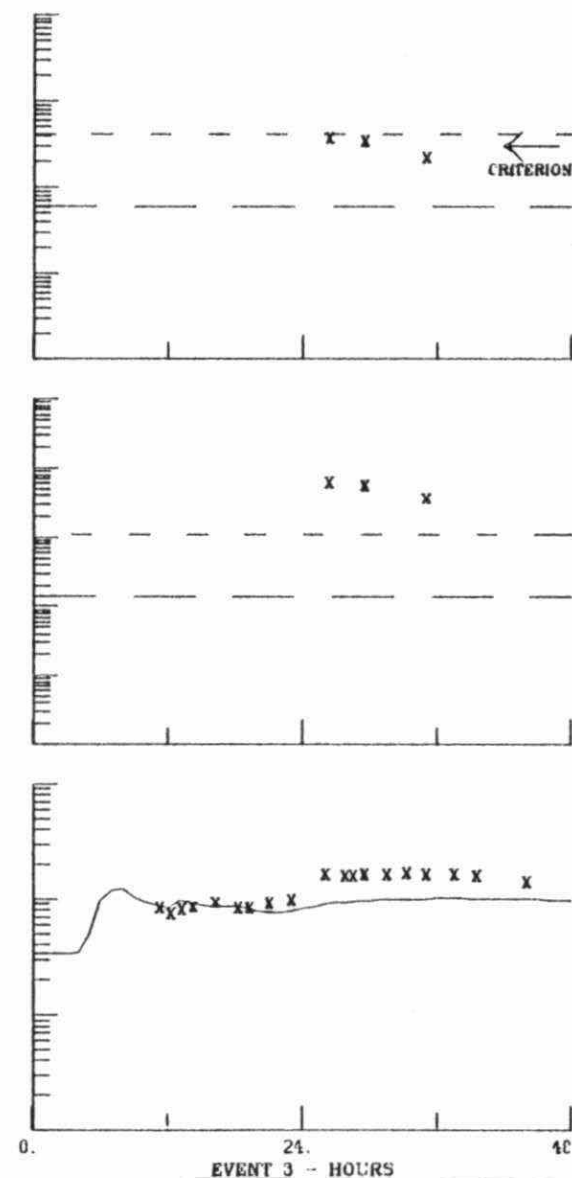
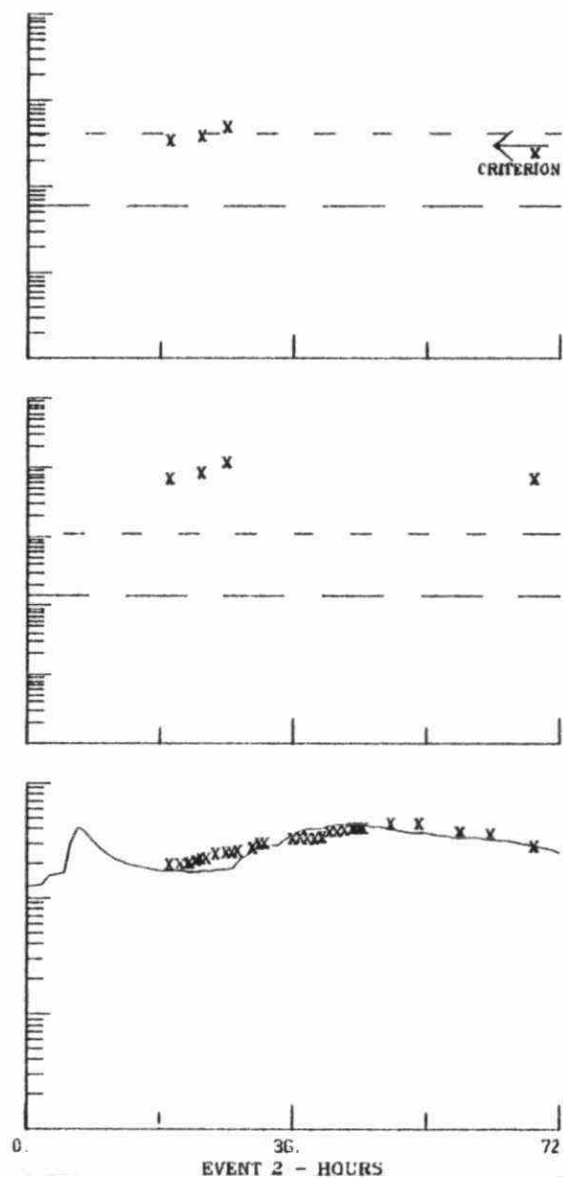
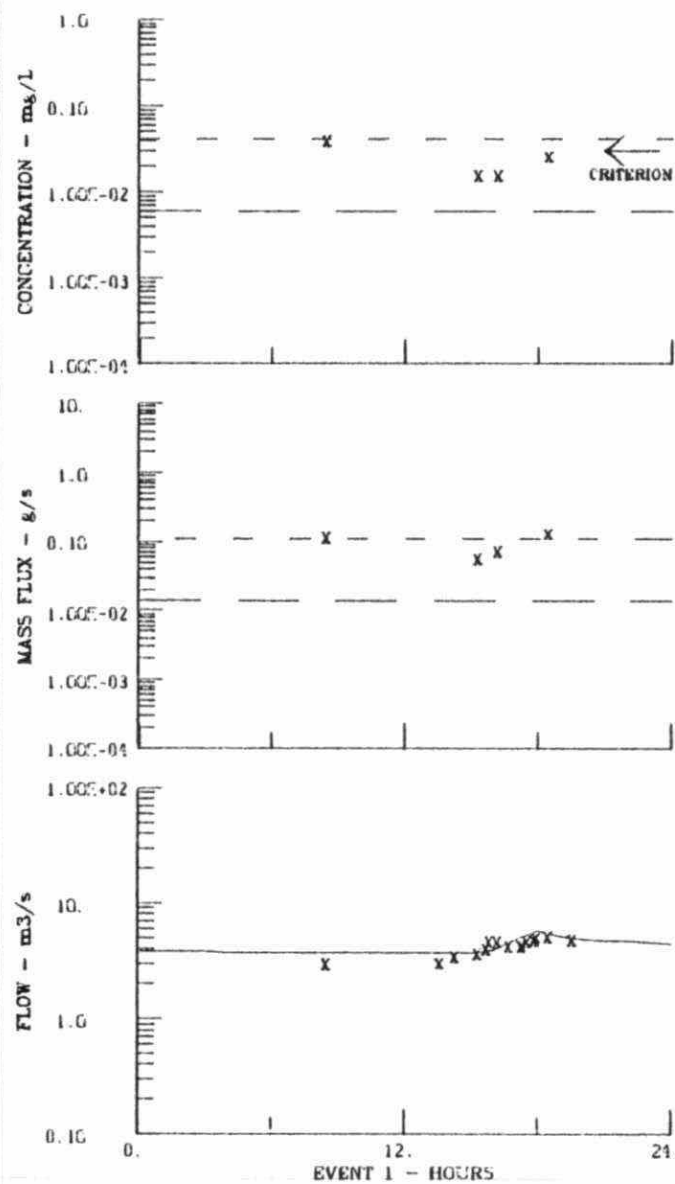
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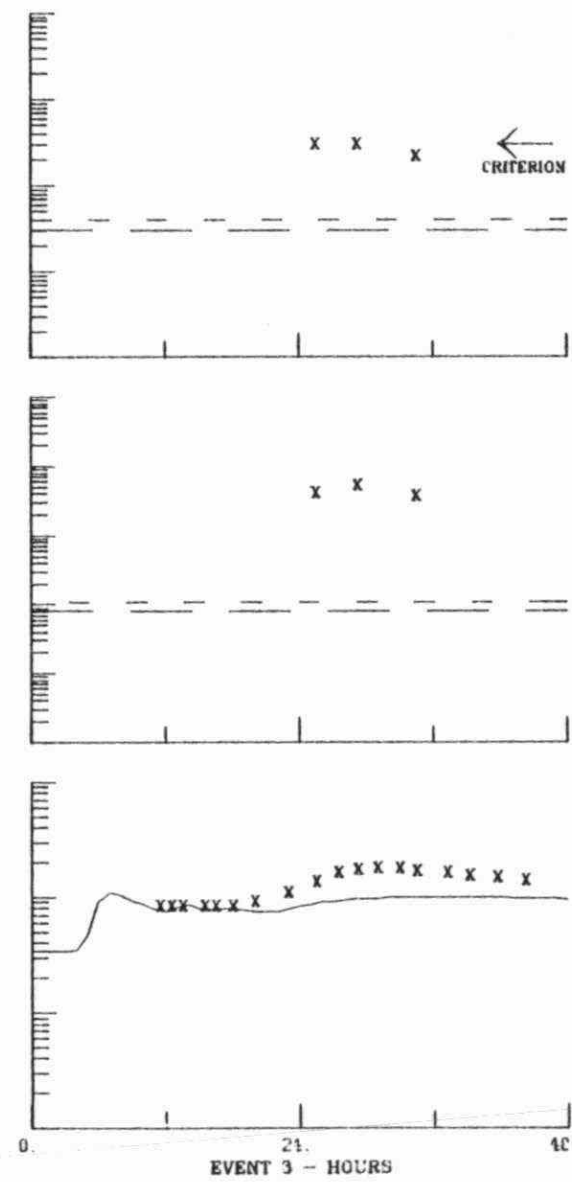
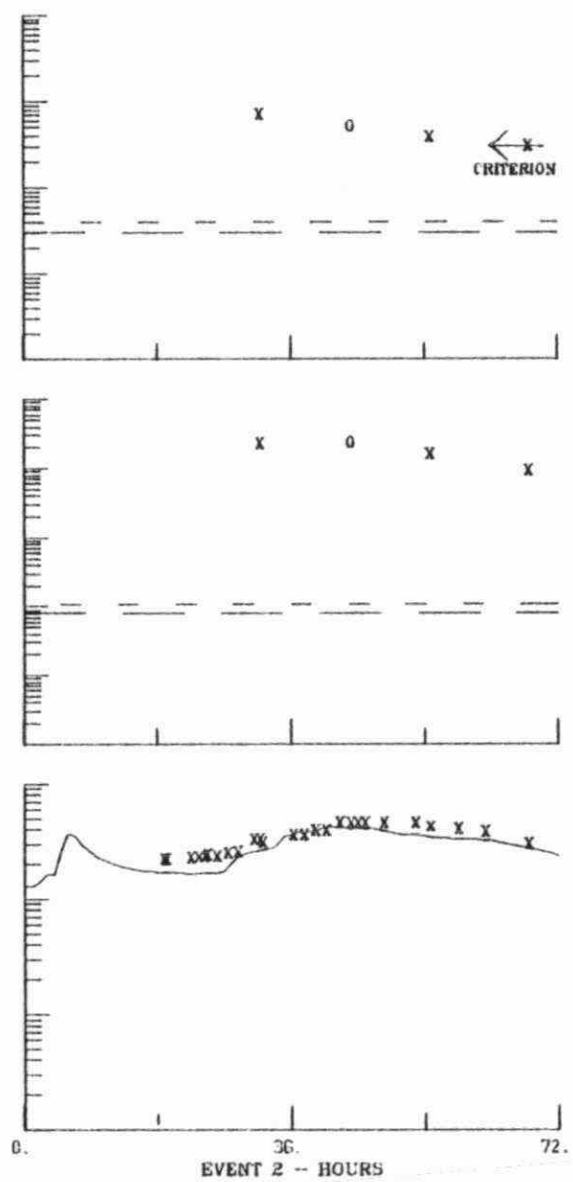
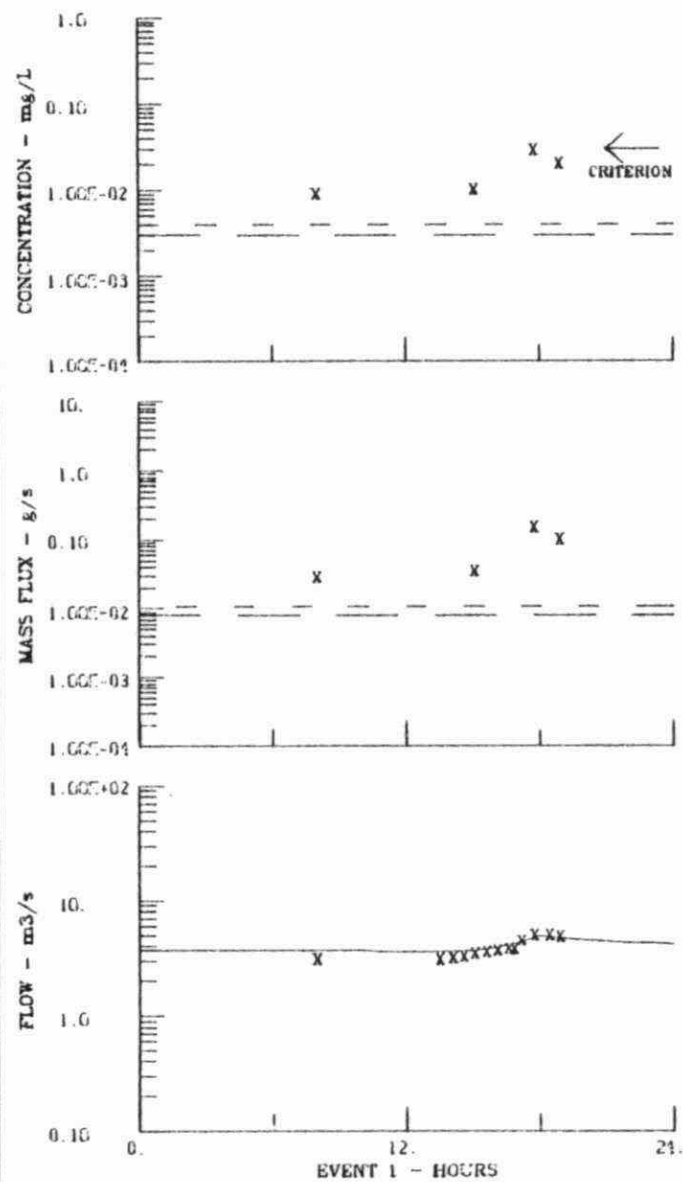
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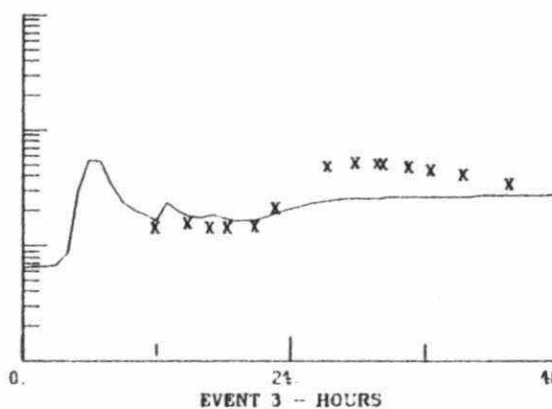
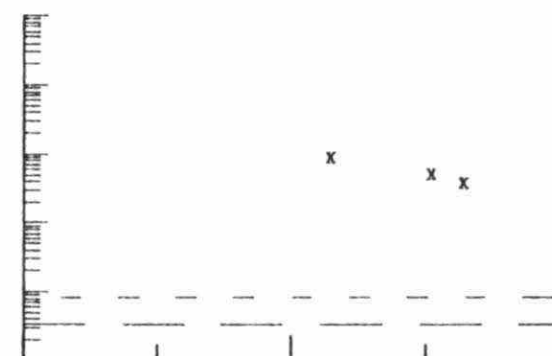
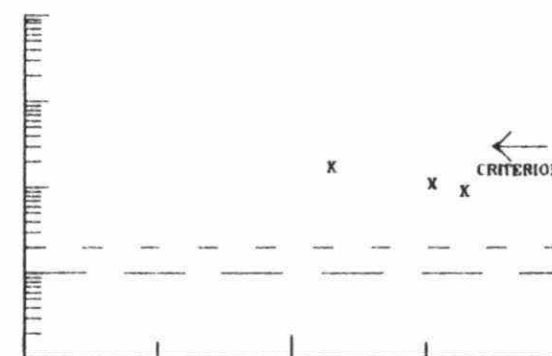
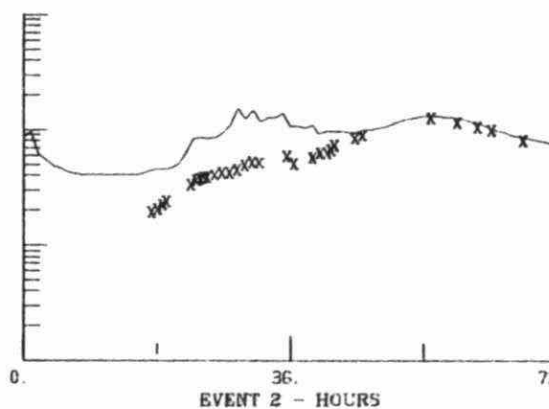
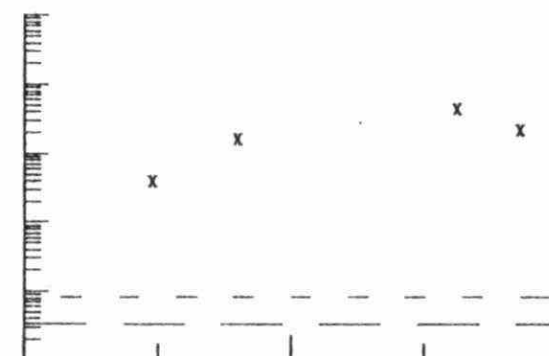
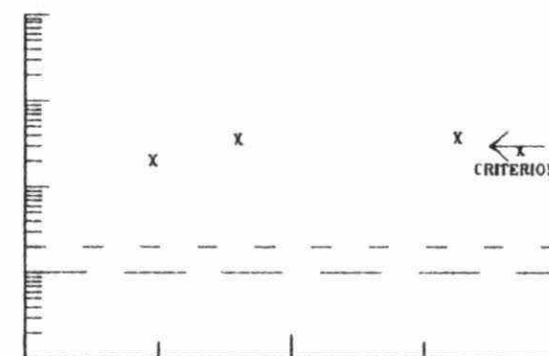
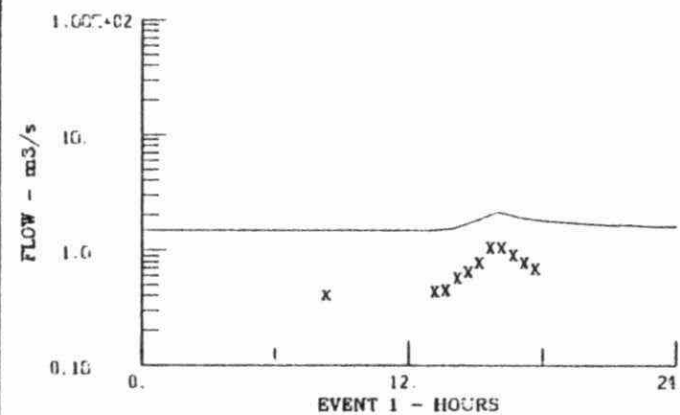
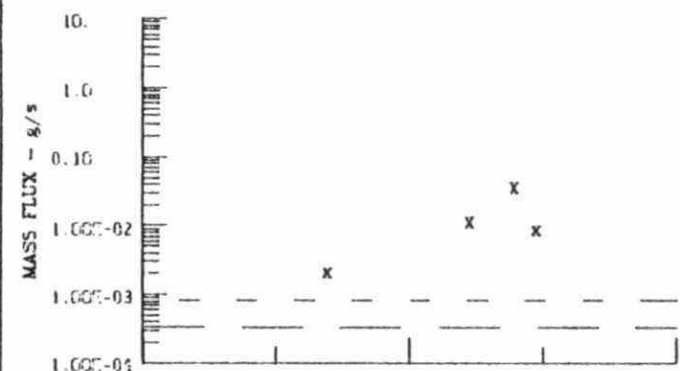
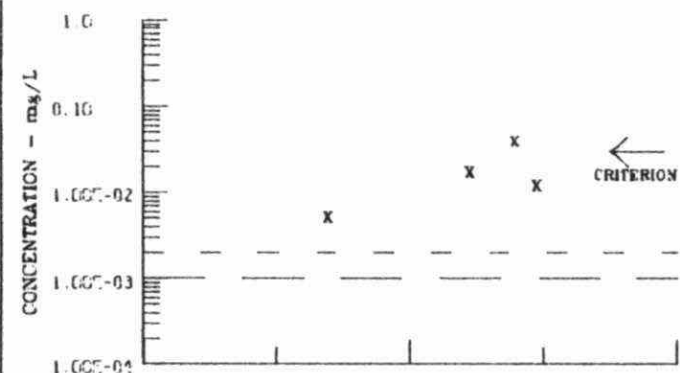
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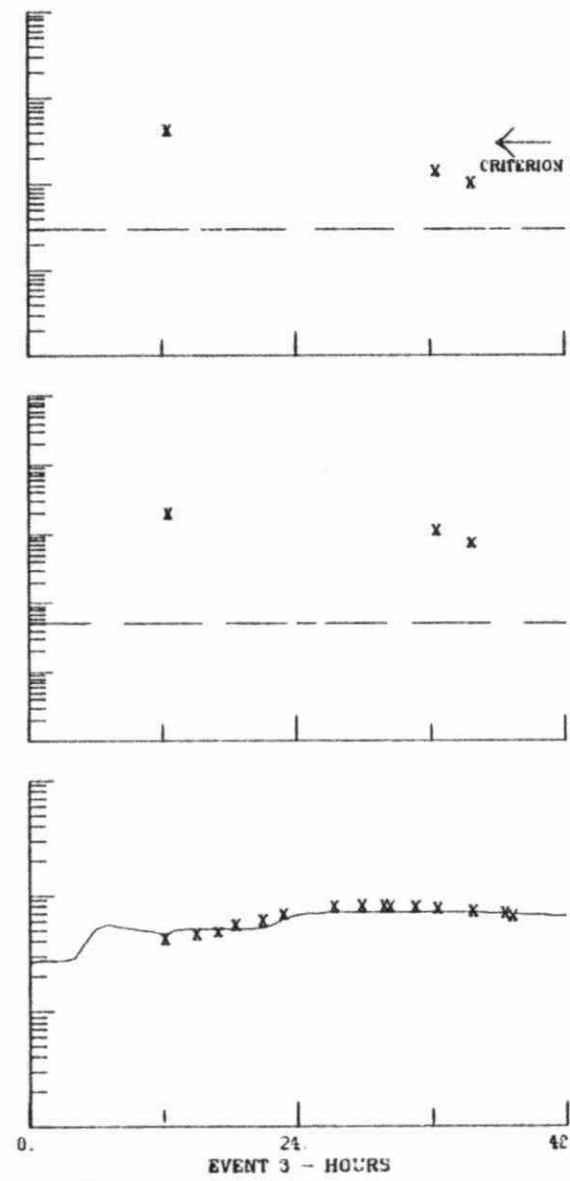
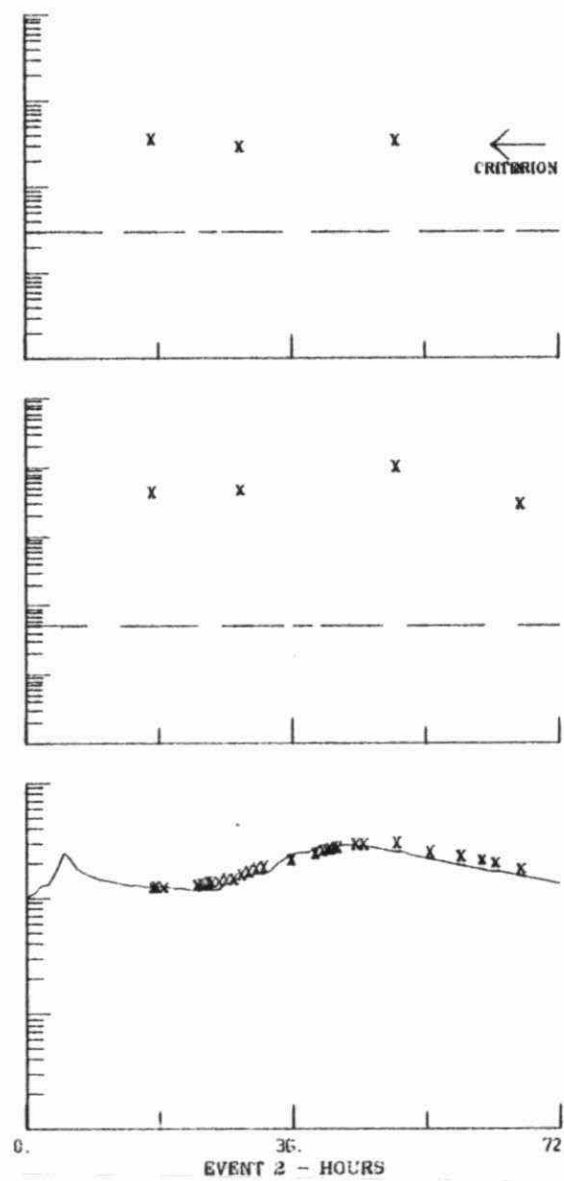
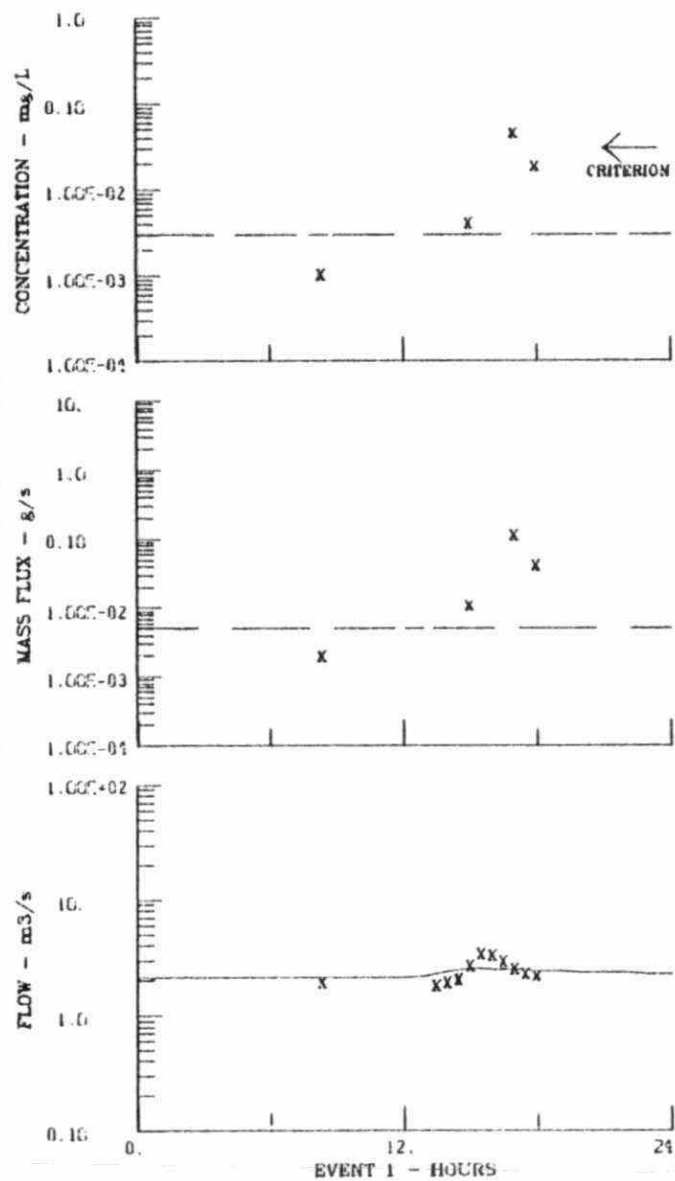


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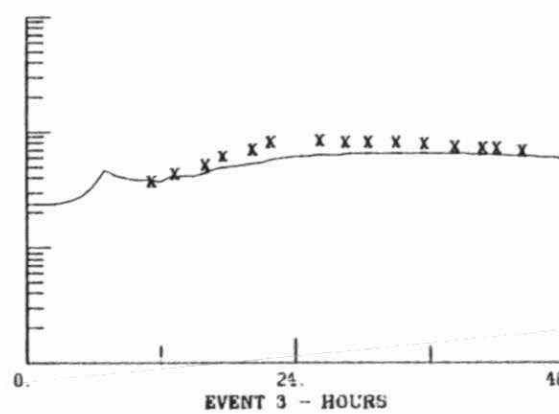
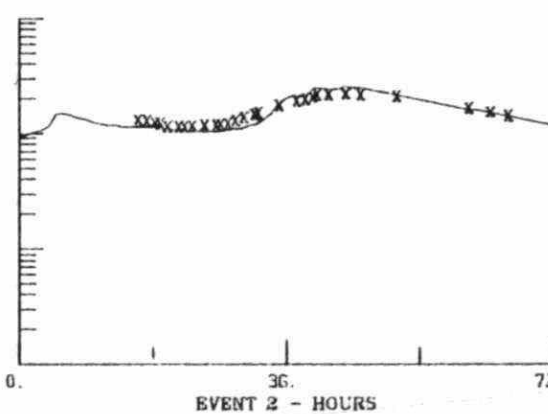
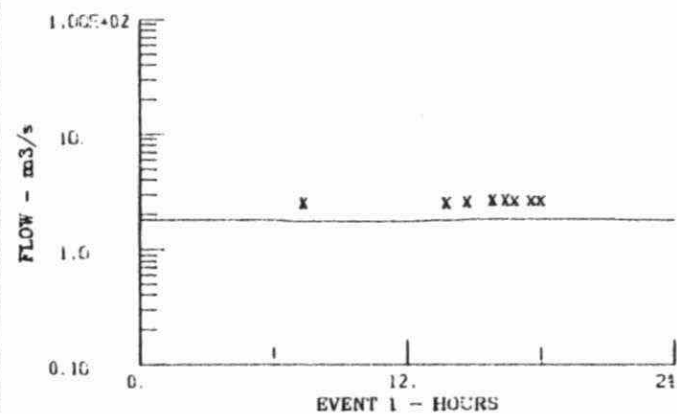
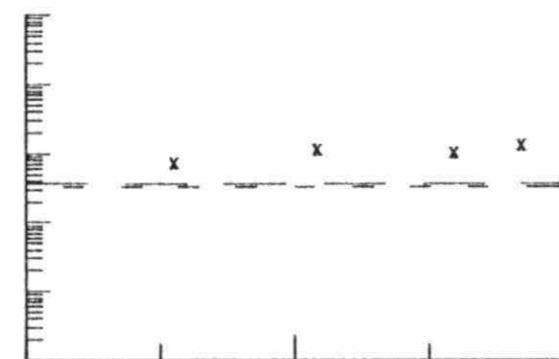
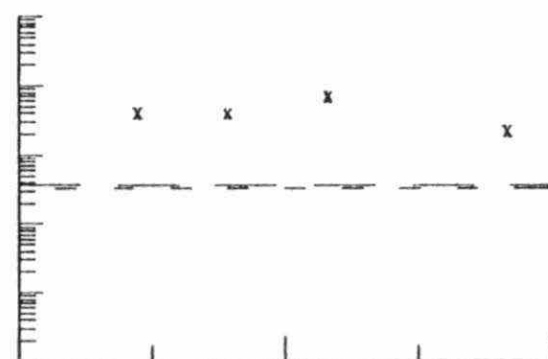
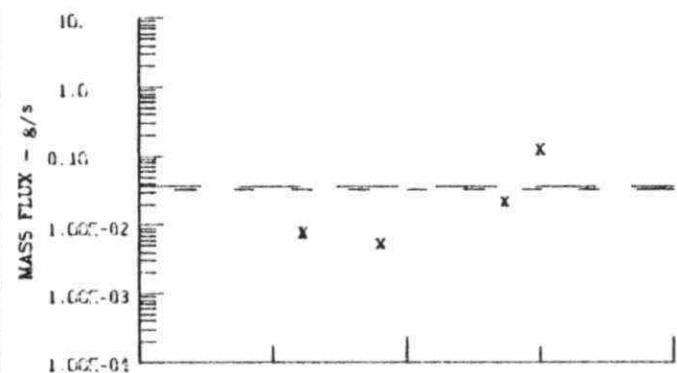
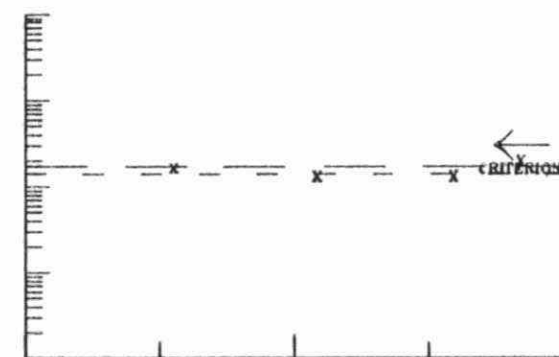
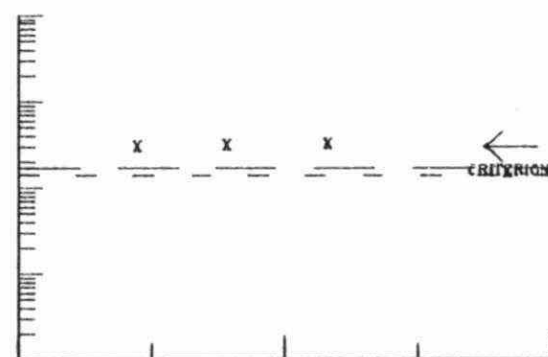
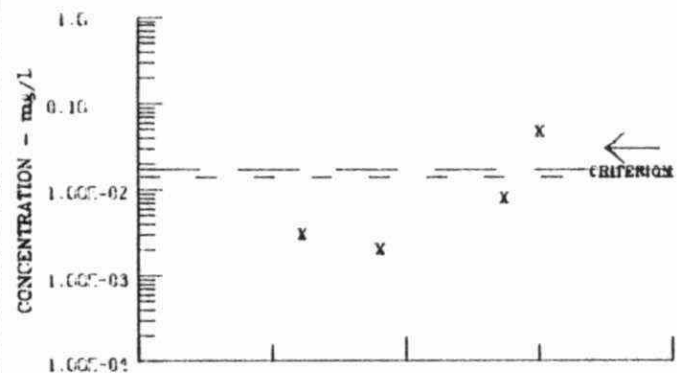


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TAWMS '82 - PART 2
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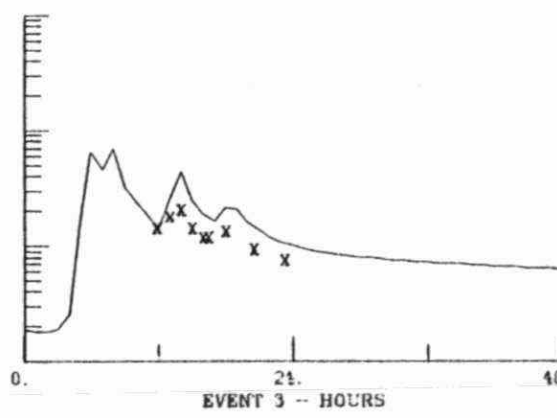
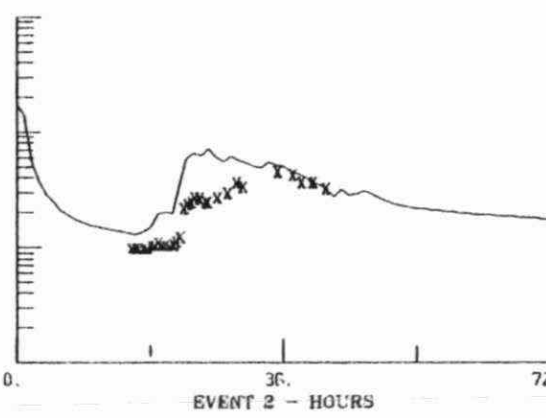
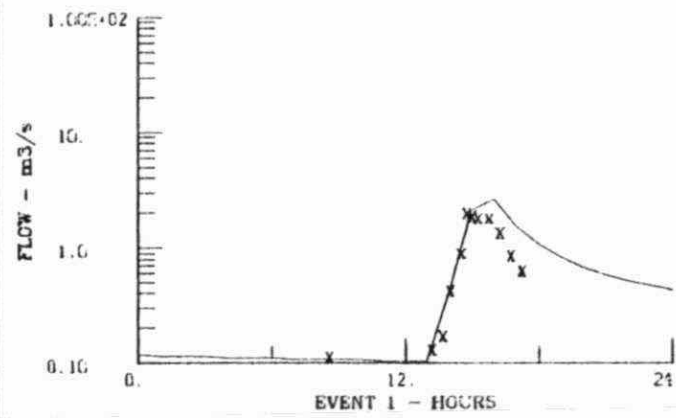
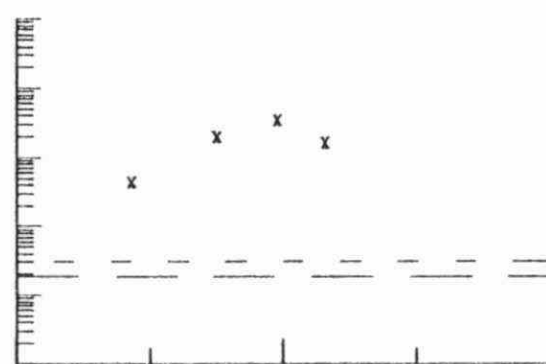
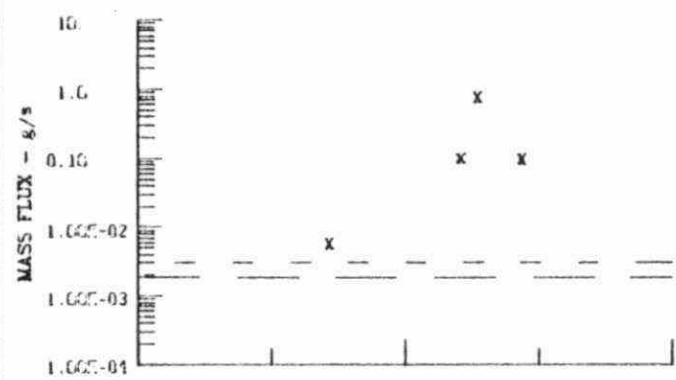
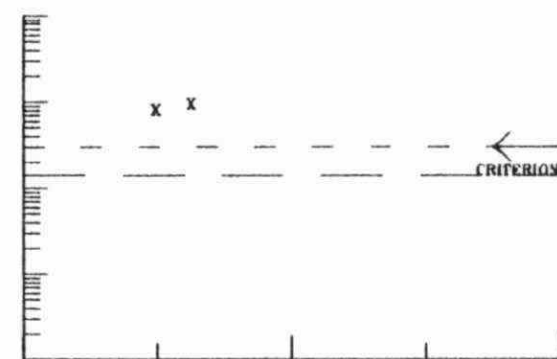
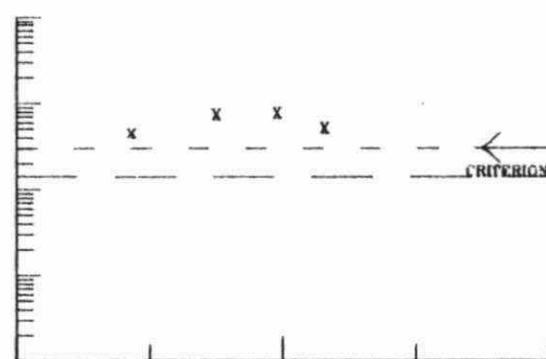
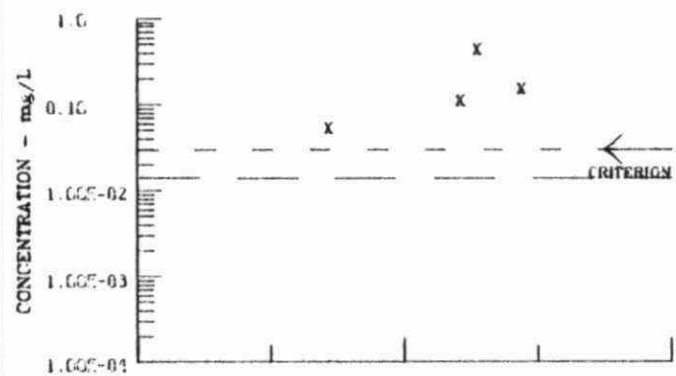




ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 9 - ZINC



ONTARIO MINISTRY OF THE ENVIRONMENT
TAWMS '82 - PART 2
SITE 10 - ZINC



APPENDIX L

HYDROLOGICAL SIMULATION PROGRAM -
FORTRAN (HSP-F)

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APPENDIX L

HYDROLOGICAL SIMULATION PROGRAM - FORTRAN (HSP-F)

1 - INTRODUCTION

Hydrological Simulation Program - FORTRAN (HSP-F) is a comprehensive hydrologic and water quality simulation model developed for the United States Environmental Protection Agency (US EPA). The strength of this model lies in its broad capability to simulate the physical processes occurring in the watershed such as runoff, snow accumulation and melt, and water quality. Each of the individual physical processes is modeled by an independent section within HSP-F. This modular organization leads to a well structured and manageable simulation model.

In this appendix, the use of HSP-F to determine the channel discharge at specific points in the Lower Humber River Basin is discussed. HSP-F utilizes discrete time step simulation of the precipitation, runoff, and hydraulic routing processes to determine the streamflow at desired points.

The use of HSP-F to simulate the behavior of a conservative substance in the Lower Humber River Basin is discussed in Sections 2.5 and 3.8 of the main report.

2 - HSP-F: THE MODEL

HSP-F represents a drainage basin as a network of land segments and river reaches. Two types of land segments are used--pervious and impervious. Figure L-1 shows a network with land segments and reaches representing Black Creek, as configured for the hydrologic simulation.

Pervious land segments allow significant amounts of infiltration. Water movement is considered over three paths

- overland flow
- interflow
- groundwater flow.

Open fields, parks and cemeteries are examples of areas which would be represented by pervious land segments. HSP-F module PERLND simulates the processes occurring in a pervious land segment. The water quantity segment of this module is conceptually similar to the Stanford Watershed Model. Erosion and water quality constituents which are transported with soil are modeled in association with overland flow only.

Impervious land segments are used where little or no infiltration takes place. Water movement is considered only as overland flow with no interflow or groundwater components. Roads, paved parking lots and densely populated areas are examples of areas represented by impervious land segments. HSP-F module IMPLND simulates the processes occurring on an impervious land segment.

Overland flow, interflow and groundwater flow from land segments find their way into the adjacent reach. The reach conveys water downstream to the next reach in the network. Module RCHRES simulates processes within single, open channel reaches or within completely mixed lakes or reservoirs. The kinematic wave assumption is used. Outflow from a single reach or reservoir can be directed through one or more outlets. This feature adds flexibility to the model and allows for modeling of

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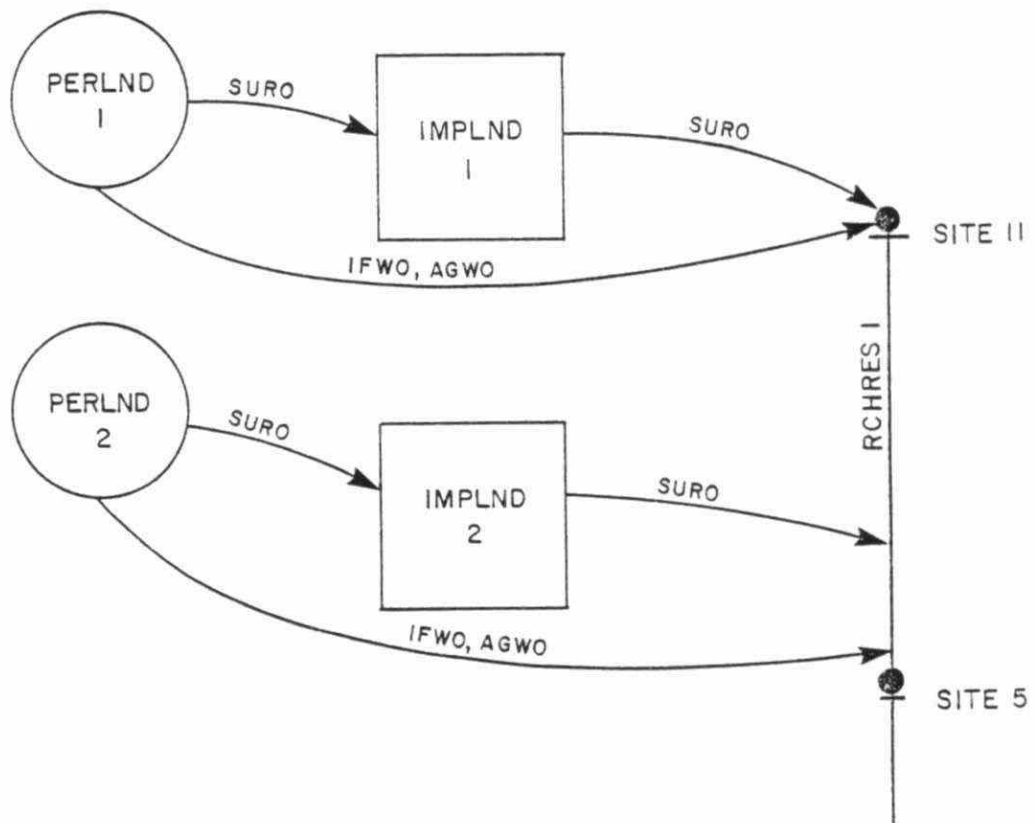
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LEGEND

PERLND - PERVIOUS LAND SEGMENT
 IMPLND - IMPERVIOUS LAND SEGMENT
 RCHRES - CHANNEL REACH
 SURO - SURFACE WATER OUTFLOW
 IFWO - INTERFLOW WATER OUTFLOW
 AGWO - ACTIVE GROUNDWATER OUTFLOW

● SAMPLING SITE
 + END OF REACH

NOTE

THERE ARE PRECIPITATION INPUTS AND EVAPORATION OUTPUTS FOR EACH LAND SEGMENT AND FOR THE CHANNEL REACH.

FIG. L-1

diversions or multiple gate outlets on a reservoir. Water quality processes, including decay, settling, benthic sources, and reaeration can be simulated within this module.

Simulation of the naturally occurring physical processes by HSP-F (such as snowmelt and runoff) is organized according to the three types of components in the network using the associated HSP-F module. Each module has a repertoire of sections, each capable of simulating a separate process. The organization of these sections is illustrated in Figure L-2. In addition to the application modules, there are utility modules which perform support tasks such as data manipulation, statistical analysis, or formatting of output. For each component in the network it must be decided which sections are required to simulate the desired physical processes. The simulation then takes place on a section-by-section basis, the output of a certain section usually becoming the input of another section.

A major requirement of HSP-F is input data. The input data can be classified into two types. The first type is data which describe the physical characteristics of the land segments and reaches. For land segments these parameters include slope, length of flow path, roughness coefficients and, in the case of pervious land segments, infiltration coefficients. In the case of a reach, information is given specifying the discharge, volume and surface area for a variety of stages. These types of data, with a few exceptions, are considered to be stationary with respect to time. The second type of input data is time series data. Time series such as precipitation, evaporation and solar radiation are utilized as input by the HSP-F sections which simulate specific processes. To properly reproduce rapidly changing processes, hourly time series are desirable if they are available.

To efficiently manage the very large amount of data which results from numerous hourly time series, HSP-F makes use of a direct access binary file referred to as the time series store (TSS). The TSS is created, loaded and managed by HSP-F utility modules acting on instructions given by the user. The HSP-F user never has any direct dealing or contact with the TSS.

APPLICATION MODULES

PERLND

SNOW
WATER
SEDIMENT
QUALITY
PESTICIDE
NITROGEN
PHOSPHORUS
TRACER

IMPLND

SNOW
WATER
SOLIDS
QUALITY

RCHRES

HYDRAULICS
CONSERVATIVE
TEMPERATURE
SEDIMENT
NONCONSERVATIVE
BOD/DO
NITROGEN
PHOSPHORUS
CARBON
PLANKTON

UTILITY MODULES

COPY

DATA TRANSFER

PLTGEN

PLOT DATA

DISPLY

TABULATE AND
SUMMARIZE

DURANL

DURATION ANALYSIS

GENER

TRANSFORM OR COMBINE

SOURCE

T.O. BARNWELL JR., 1982 .

FIG.L-2

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HSPF MODULES



Once the TSS has been created, an HSP-F simulation run is made by supplying a user control input (UCI). The UCI contains all the information needed to direct HSP-F through a simulation. This information includes a precise description of the network representing the basin, specification of which modules and sections are to be activated and the location and names of the time series in the TSS. In addition, the UCI contains the physical data which describe the characteristics of the land segments and reaches.

On completion of a simulation run, HSP-F outputs detailed information on the processes which it simulated. There are two forms of HSP-F output. A detailed summary containing the value of each parameter which was simulated is available at a user-specified interval (hour, day, month or year). The other form of output is time series of simulated parameters such as streamflow. Time series output is controlled by the PLTGEN module.

3 - APPLYING HSP-F TO THE HUMBER RIVER BASIN

HSP-F was applied to the Humber River Basin for two different seasons under separate contracts. Initially, HSP-F was set up for the fall of 1982, to simulate the months from August to November. In the second phase of TAWMS 82, HSP-F was applied to the winter and spring of 1982/83 which included the months from December to May. These two applications of HSP-F were similar, the major differences being the inclusion of snowmelt and a new land segment and reach during the winter. This section discusses how HSP-F was applied to the Humber River Basin and points out differences between the fall and winter applications.

3.1 - The Network

The Lower Humber River Basin was represented in HSP-F by a network of pervious and impervious land segments and river reaches. Land segments were defined by Gartner Lee Associates Limited, as part of its study of Toronto area sewersheds. For the fall simulations, 17 pervious and 13 impervious land segments and 15 reaches were used to represent the Humber River Basin between Elder Mills and Lake Ontario. The main channel of the Humber was divided into 10 reaches, with the remaining 5 reaches representing tributaries such as the West Humber and Black Creek. For the winter simulation, another pervious land segment and river reach were added to the network to allow the inclusion of the new Site 12 sampling site at Cook Creek.

A schematic illustration of the entire network used for the hydrologic simulation is shown in Figure L-3. In this particular schematic arrangement, the input to the pervious land segments is precipitation while the outflow consists of evaporation, surface runoff, interflow and active groundwater. The inputs to the impervious land segments are precipitation and surface runoff from the pervious land segment located immediately upstream. The outflow from the impervious land segment consists of evaporation and surface runoff. The inputs to the channel

LEGEND

—|— RIVER REACH



PERVIOUS LAND SEGMENTS



IMPERVIOUS LAND SEGMENTS



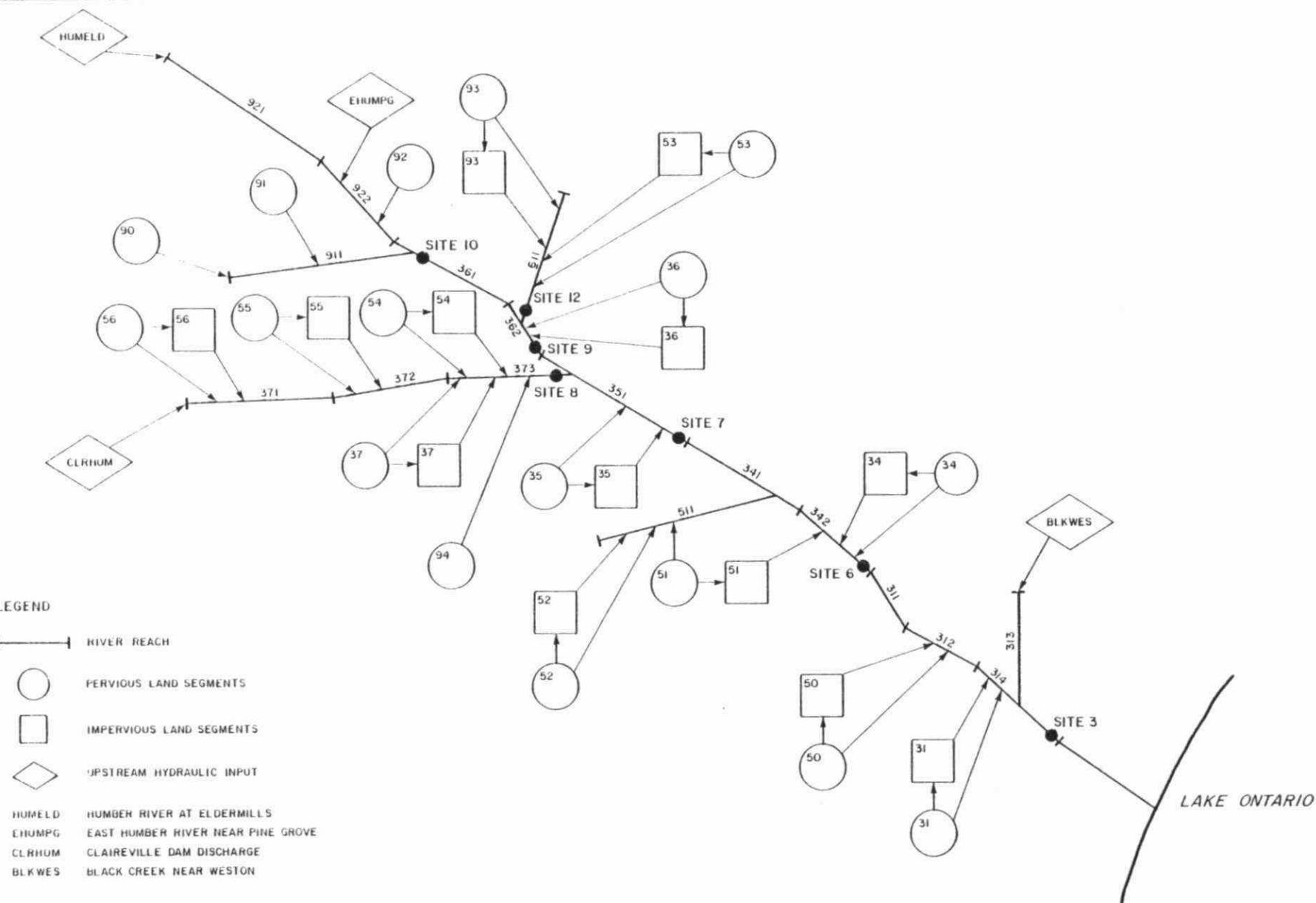
UPSTREAM HYDRAULIC INPUT

HUMELD HUMBER RIVER AT ELDERMILLS
 EHUMPG EAST HUMBER RIVER NEAR PINE GROVE
 CLRHUM CLAIREVILLE DAM DISCHARGE
 BLKWES BLACK CREEK NEAR WESTON



SAMPLING SITE

→ PATH OF WATER MOVEMENT



ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 HUMBER RIVER BASIN SCHEMATIC DIAGRAM

FIG. L-3



reach are precipitation, surface runoff from the impervious land segments, interflow and active groundwater outflow from the pervious land segment. The outflows from the reach are evaporation and downstream outflow. In a more general schematic arrangement, outflow from an upstream channel reach becomes inflow to the next reach downstream.

The connectivity of these segments represents the physical processes occurring in the basin for the following reasons

- surface outflow from the pervious land segments (lawns, parks, etc) flows onto the surface of the impervious land segments (streets)
- interflow and active groundwater either flow into storm sewers which drain to the channel reach or flow directly into the channel reach
- surface outflow from the impervious land segments flows into storm sewers which drain to the channel reach.

HSP-F is flexible and the connectivity of module inflows and outflows can be easily altered to describe the physical behavior of alternative situations.

3.2 - Choice of HSP-F Modules

As was previously stated in this appendix, the primary goal of applying HSP-F to the Lower Humber River Basin was to determine discharges at specific points on the river and some of its tributaries. With this goal in mind, the appropriate HSP-F application modules were chosen. Since both pervious and impervious land segments and river reaches were used in representing the basin, all three of the applications modules, PERLND, IMPLND and RCHRES, were utilized. Within these modules, specific module sections were chosen. During the fall and winter, sections PWATER and IWATER were used to simulate the runoff processes on the pervious and impervious land segments respectively. Section HYDR models the flow in the river reaches. When HSP-F was used for the winter simulations, section SNOW was also applied to both the pervious

and impervious land segments to model the creation, accumulation and melting of a snowpack.

3.3 - Time Series Data

To simulate the Lower Humber River Basin, HSP-F requires several time series of data such as precipitation, evaporation and upstream hydraulic inflow. The specific time series which are required depend on which of the HSP-F modules and sections are being utilized. The required time series and their sources vary from the fall to winter simulation.

3.3.1 - Fall Simulation

(a) Precipitation

Precipitation is used as the basic input to runoff modeling by sections PWATER and IWATER. Thiessen polygons were drawn over the basin and the Thiessen weighting factors were used to derive the precipitation time series for each land segment modeled. In total, 10 meteorological stations located in or near the basin were used to derive the precipitation time series, although at any one time, less than 10 were actually being used. This variation of meteorological stations was necessitated because some stations only operated until the end of October and some stations had periods of missing data.

The precipitation time series were obtained from a variety of sources. Environment Canada's Atmospheric Environment Service (AES), the City of Toronto Department of Public Works, and the Ontario Ministry of the Environment all contributed time series of precipitation.

(b) Evaporation

Evaporation is important for the correct modeling of the physical processes by HSP-F, however, it presents a problem because of poor data availability. Ideally, evaporation data would be available on a daily or even hourly basis at a nearby meteorological station.

For the Lower Humber River, two possible sources of evaporation data exist

- long-term mean monthly lake evaporation from the Atlas of Climatic Maps*
- daily Class A pan evaporation at the Elora Research Station which is located about 50 km north of Guelph, Ontario.

Pan evaporation is only measured during the months when the temperature normally is above freezing and hence is only available for August and September for the fall simulation. The evaporation time series used for the fall simulation utilized the daily Elora data for August and September with the remainder of the time series being made up by uniformly distributing the mean monthly evaporations taken from the climatic atlas.

(c) Hydraulic Inflows

Hydraulic inflows at the upstream end of the modeled basin were required input to the simulation model because only the hydrology of the lower portion of the Humber River Basin was

*Atlas of Climatic Maps, Canada Department of Transport, Meteorological Branch, 1967.

being modeled. Discharges and stages for the Humber at Elder Mills, the East Humber at Pine Grove, and Black Creek at Weston Road were obtained from the Water Survey of Canada (WSC).

HSP-F requires discharges to be expressed in volume per simulation time step. Since the simulation time step was 1 hour, a trapezoidal integration of the 15-min WSC discharges over each hour was performed.

Flows on the East Humber are regulated by the Claireville Dam. Hourly discharge volumes were obtained from stage records, rating curves, and operating records provided by the Metropolitan Toronto and Region Conservation Authority (MTRCA), the owners and operators of the dam.

3.3.2 - Winter Simulation

(a) Precipitation

Precipitation must be total precipitation consisting of both rain and the water equivalent of any snowfall that occurred. The only meteorological station in the area from which total precipitation is readily available during the winter is Toronto International Airport. All of the stations located in, or closer to the Humber River Basin, either do not measure snowfall, or do not operate at all during the winter.

Due to the type of recording gauge used, only rainfall is measured on an hourly basis at the airport. Total precipitation and rainfall are available daily, and the water equivalency of snowfall (if any occurred) can be found from the difference of these two time series. On days when the difference indicated that snowfall had occurred, the water equivalency of the snowfall was uniformly distributed to those hours of the day which were rainfree, and recorded a

dry bulb temperature of 0°C or less. If, as occasionally happened, no possible "snowy" hours were identified according to the above criteria but a daily snowfall was recorded, the temperature constraint was relaxed upward by 1°C increments until at least 1 hour met the snowfall criteria.

All of the hourly and daily time series for Toronto International Airport were obtained from AES on magnetic tape.

(b) Evaporation

Evaporation data are not readily available. The problems with the Elora daily evaporation data are its distance from the Humber River and the limited measuring season. In view of the deficiencies in the Elora data, it was decided that, for the winter, mean monthly evaporations from the climatic atlas would be uniformly distributed over each day in the month. Since the atlas does not have evaporation for December to February, some values had to be assumed. Physically, some evaporation will take place in the winter either from rain or snowmelt, or directly as sublimation from snow and ice. It was assumed that December and February evaporation was 50% of the published value for March, and evaporation during the coldest part of the winter, January, was negligible. These assumptions and, in general, this treatment of evaporation are probably adequate because only in April and May is there really enough evaporation to have any effect on the water balance carried out in the HSP-F simulation runs.

(c) Air Temperature

Air temperature is needed for the simulation of snowfall during the winter. This time series is readily available from numerous meteorological stations on an hourly basis. For the winter HSP-F simulations, hourly dry bulb

temperature readings at Toronto International Airport were used. This is consistent with the precipitation data, for which there was no alternative to the airport. This time series was obtained from AES on tape.

(d) Dew Point

Dew point is also a required time series for the simulation of snow. Like temperature, hourly dew point was obtained for Toronto International Airport from AES.

(e) Wind Speed

Hourly wind speed was obtained on an hourly basis for Toronto International Airport from AES and is used in the simulation of snow accumulation and melting.

(f) Solar Radiation

Hourly solar radiation is available for the Toronto Meteorological Research Station. These data had to be converted from the standard AES units of megajoules per square metre to the units required by HSP-F, langley's per simulation time step (1 hour). The appropriate AES time series is "Global Solar Radiation", because HSP-F models the reflection of both long- and short-wave radiation and cloud cover.

(g) Hydraulic Inflows

Hydraulic inflows are necessary to account for the upstream portions of the Humber River Basin. As in the fall simulations, time series of discharges were required for the Humber at Elder Mills, the East Humber at Pinegrove, Black Creek at Weston Road, and the Claireville Dam.

During the winter, periods of ice cover occurred on the Humber River and Black Creek. Discharge records published by the WSC for these sites only contain data during periods of open water. All of the periods of ice cover during the winter of 1982/83 were short, therefore it was assumed that the WSC open water rating curve was still valid because the ice cover was smooth and not thick enough to permit pressure flow. Time series of hourly discharge volumes were created by converting the uninterrupted 15-min stage measurements to discharges, and then using trapezoidal integration over each hour.

Claireville Dam discharge volumes were prepared in the same manner as in the fall.

Input time series generally had to be reformatted to match the input format required by HSP-F.

A new TSS is created to hold the time series with the HSP-F subprogram NEWTSS. The TSS must be prepared for the data by creating a directory and specifying the size and name of each time series to be stored. This is done using the TSSM subprogram of HSP-F. Time series are loaded into the prepared TSS using the COPY module.

3.4 - Running HSP-F

Each HSP-F simulation run is controlled by a file called a user control input (UCI). This file contains all the instructions needed to steer HSP-F through a complete simulation. The UCI contains the description of the network, information on the location of each time series, and all of the stationary physical data about the land segments and river reaches. The creation of a correct UCI is necessary to the production of meaningful simulation results.

Variations in the configuration of the network, or in the values of various physical data, are explored in successive simulations by making changes to UCI files. This process is used when calibrating the model.

In order to be able to quickly interpret the output of HSP-F, it is imperative that the HSP-F output be directed to an external plotting routine which can visually display the results of a simulation run. Such a plotting routine was used extensively to compare the discharges simulated by HSP-F to historical WSC discharges and discharges measured during the TAWMS field program.

4 - HSP-F MODEL CALIBRATION

The objective of the HSP-F simulation was to determine the channel discharge at certain points on the Lower Humber River. This was achieved by supplying the necessary data and instructions to the HSP-F model. Many of the physical input parameters, such as the infiltration rate, and Manning's n, are not known accurately. Within a range of physically reasonable values, the exact value is chosen so that HSP-F produces the best results. Calibration consists of tuning HSP-F to give the results which most closely reflect those which actually happened. It should be stressed that this was a modeling exercise, not a curve fitting exercise, and therefore only values of the parameters which made physical sense were used in the calibration.

The calibration was done for both the fall and winter, each in two phases. HSP-F was first set up and calibrated for Black Creek and then, later, calibrated for the Humber. The advantage of this approach is that Black Creek is relatively simple as far as the network is concerned and therefore an HSP-F simulation run is reasonably quick and inexpensive. Black Creek can be considered fairly representative of the entire Lower Humber River Basin. The sensitivity of each of the user specified parameters was examined and the value of each parameter which gave the best results was determined. With the knowledge gained during the calibration of Black Creek, calibrating HSP-F for the Humber River was much easier.

4.1 - Fall Calibration

HSP-F was initially calibrated for both Black Creek and the Humber River for the fall of 1982.

4.1.1 - Black Creek Calibration

An initial calibration trial was made using HSP-F default values and estimated values where necessary. The required estimates

were made using available maps and reasonable hydrologic judgment. Table L-1 lists initial and final values for the various parameters as well as the range of values which were used in over 40 sensitivity trial runs. A brief description of the parameters in Table L-1 is given in Table L-2. Figure L-4 shows a comparison between calculated and measured outflow at Site 5 for the initial uncalibrated run of HSP-F. Figures M-1 and M-2, Appendix M, show measured and calculated outflows at Sites 5 and 11 using the final calibrated parameter values. The comparison between measured and calculated discharge is clearly better using the final calibrated values.

Since this was the initial calibration of HSP-F in the Toronto metropolitan area, considerable effort was spent on identifying the relative sensitivity of the input parameters. Table L-3 lists the parameters in groups of relative significance.

Each group is commented on briefly below.

(a) Primary Significance

The parameters of primary significance were the overland flow routing parameters (Manning's n , length, slope) for the impervious land segments. These parameters largely influenced the "peakiness" of the simulated runoff. Figure L-5 shows simulation results for a run where these three parameters were all adjusted to decrease the responsiveness of overland flow.

(b) Secondary Significance

The groundwater recession constant affected the shape of the receding limbs of the hydrographs. The changes caused by adjustments to this parameter were not large but were certainly significant. The difference in the recession shape between Figures L-4 and M-1 clearly indicate the difference between the uncalibrated and calibrated value of the groundwater recession constant.

TABLE L-1

HSP-F FALL PARAMETER
VALUES FOR BLACK CREEK

Module	Parameter	Initial Value	Range Tested	Final Value
PERLND	CSNOFG	0*	0*	0*
	RTOPFG	1	1	1
	UZFG	0*	0*	0*
	VCSFG	0*	0* - 1	1
	VUZFG	0*	0*	0*
	VNNFG	0*	0* - 1	1
	VIFWFG	0*	0*	0*
	VIRCFG	0*	0*	0*
	VLEFG	0*	0*	0*
	FOREST	0.0*	0.0*	0.0*
	LZSN (mm)	200	100 - 200	100
	INFILT (mm/h)	4.0	0.025 - 6.0	4.0
	LSUR (m)	50	50 - 300	50
	SLSUR	0.01	0.01 - 0.001	0.01
	KVARY (1/mm)	0.0*	0.0 - 0.00001	0.0*
	AGWRC (1/d)	1.0	0.1 - 1.0	0.8
	PETMAX (°C)	4.4*	4.4*	4.4*
	PETMIN (°C)	1.7*	1.7*	1.7*
	INFEXP	2.0*	1.5 - 2.0*	2.0*
	INFILD	2.0*	2.0*	2.0*
	DEEPPFR	0.0*	0.0*	0.0*
	BASETP	0.0*	0.0*	0.0*
	AGWETP	0.0*	0.0*	0.0*
	CEPSC (mm)	3.0	0 - 3.0	**
	UZSN (mm)	16.0	10 - 16.0	10.0
	NSUR	0.25	0.25 - 0.5	**
	INTFW	1.0	1.0	1.0
	IRC (1/d)	0.01	0.001 - 0.1	0.001
	LZETP	0.1	0.0* - 0.1	0.0*
	CEPS (mm)	0.0*	0.0*	0.0*
	SURS (mm)	0.0*	0.0*	0.0*
	UZS (mm)	0.025*	0.025* - 16	5.0
	IFWS (mm)	0.0*	0.0*	0.0*
	LZS (mm)	0.025*	0.025* - 200	30
	AGWS (mm)	0.0*	0.0* - 2500	30
	GWVS (mm)	0.0*	0.0*	0.0*
IMPLND	CSNOFG	0*	0*	0*
	RTOPFG	1	1	1
	VRSFG	0*	0*	0*
	UNNFG	0*	0*	0*
	RTILFG	0*	0*	0*
	LSUR (m)	1000	1000 - 2000	1500
	SLSUR	0.005	0.001 - 0.01	0.005
	NSUR	0.02	0.02 - 0.1	0.02
	RETSC (mm)	5.0	0.0 - 5.0	2.0
	PETMAX (°C)	4.4*	4.4*	4.4*
	PETMIN (°C)	1.7*	1.7*	1.7*

Table L-1
HSP-F Fall Parameter
Values for Black Creek - 2

<u>Module</u>	<u>Parameter</u>	<u>Initial Value</u>	<u>Range Tested</u>	<u>Final Value</u>
IMPLND (cont)	RETS (mm)	0.025*	0.0 - 0.025	0.025*
	SURS (mm)	0.025*	0.0 - 0.025	0.025*
RCHRES	LEN (km)	5.5	5.5	5.5
	DELTH (m)	0.0*	0.0*	0.0*
	STCOR (m)	0.0*	0.0*	0.0*
	KS	0.0	0.0 - 0.4	0.4
	DB50 (mm)	4.0	0 - 4.0	0.0
	VOL (Mm3)	0.004	0.004	0.004
	COLIND	4.3	4.3	4.3

* Default value.

**Monthly variation as follows.

<u>PERLND</u>	<u>Parameter</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>
33 + 95, 32	CEPSC (mm)	2.0	2.0	1.5	1.0
33 + 95	NSUR	0.25	0.25	0.20	0.15
32	NSUR	0.25	0.25	0.20	0.20

TABLE L-2

HSP-F PARAMETER DESCRIPTION

<u>Module</u>	<u>Parameter Name</u>	<u>Description</u>
PERLND	CSNOFG	flag: 1 - snow routines used 2 - not used
	RTOPFG	flag: 1 - overland flow routing as in HSPX, ARM and NPS 0 - new algorithm
	UZFG	flag: 1 - inflow to upper zone as in HSPX, ARM and NPS 0 - new algorithm which is less sensitive to DELT
	VCSFG)	interception storage
	VUZFG)	upper zone nominal storage
	VNNFG)	flags: 1 - monthly variation Manning's n for overland flow
	VIFWFG)	0 - fixed interflow inflow parameter
	VIRCFG)	interflow recession constant
	VLEFG)	lower zone E-T parameter
	FOREST	fraction of pervious land segment covered by forest which transpires in winter
	LZSN	lower zone nominal storage
	INFILT	index to infiltration capacity of the soil
LSUR		length of assumed overland flow plane
	SLSUR	slope of assumed overland flow plane
	KUARY	allows groundwater recession to be nonexponential in time

Table L-2
HSP-F Parameter Description - 2

<u>Module</u>	<u>Parameter Name</u>	<u>Description</u>
PERLND (cont)	AGWRC	groundwater recession rate if KUARY is zero and the inflow to groundwater is zero
	PETMAX) PETMIN)	temperatures for adjustments to E-T snow routines are used
	INFEXP	an exponent in the infiltration equation
	INFILD	ratio between maximum and mean infiltration capacities over the pervious land segment
	DEEPPFR	fraction of groundwater inflow which reaches deep (inactive) groundwater
	BASETP	fraction of remaining E-T which can be satisfied from base flow (groundwater outflow)
	AGWETP	fraction of remaining E-T which can be satisfied from active groundwater storage
	CEPSC	interception storage capacity
	UZSN	upper zone nominal storage
	NSUR	Manning's n for assumed overland flow plane
	INTFN	interflow inflow parameter
	IRC	interflow recession parameter
	LZETP	lower zone E-T parameter--an index to the density of deep-rooted vegetation

Table L-2
HSP-F Parameter Description - 3

<u>Module</u>	<u>Parameter Name</u>	<u>Description</u>
PERLND (cont)	CEPS)	interception
	SURS)	surface (overland)
	UZS)	upper zone
	IFWS)	initial water storage interflow
	LZS)	lower zone
	AGWS)	active groundwater
	GWVS)	index to groundwater slope
IMPLND	CSNOFG	as for PERLND
	RTOPFG	as for PERLND
	VRSFG)	flags: 1 - monthly variation retention storage
	VNNFG)	0 - fixed Manning's n for overland flow
	RTILFG	flag: 1 - lateral surface inflow subject to retention storage 0 - not subject to retention storage
	LSUR)	
	SLSUR)	as for PERLND
	NSUR)	
	RETSC	retention storage capacity of the surface
	PETMAX)	as for PERLND
	PETMIN)	
	RETS)	initial water storage retention
	SURS)	as for PERLND

Table L-2
HSP-F Parameter Description - 4

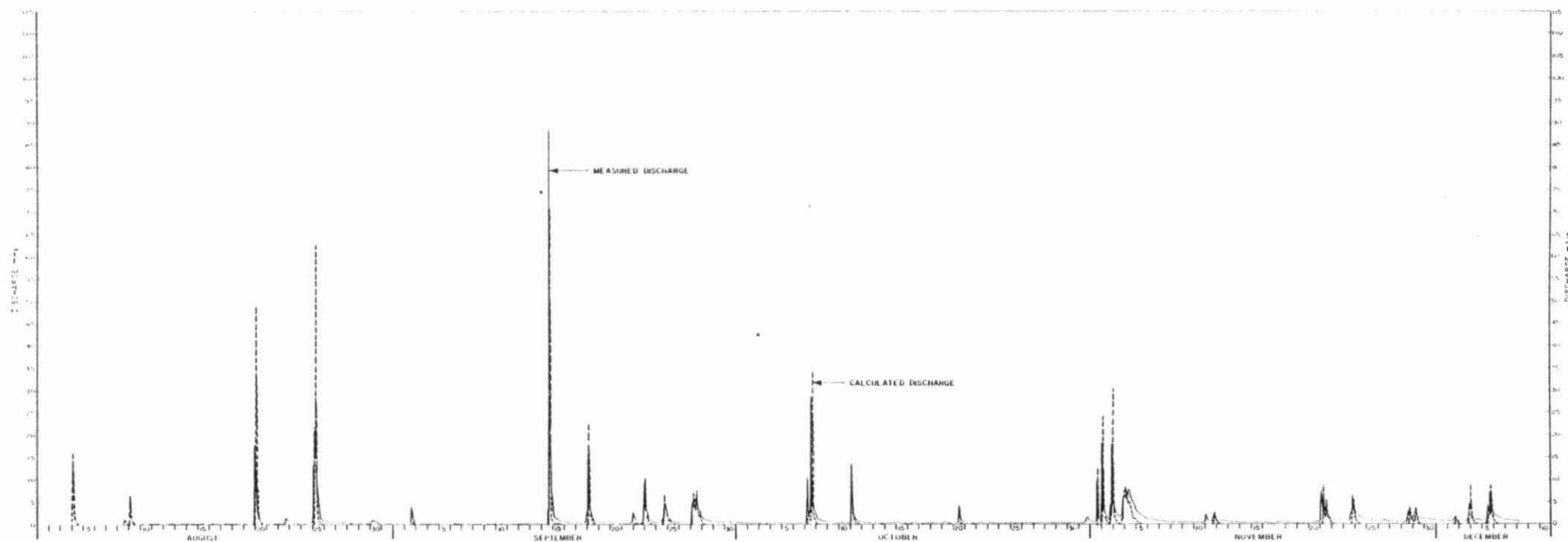
<u>Module</u>	<u>Parameter Name</u>	<u>Description</u>
RCHRES	FTABNO	user's number for F-Table containing geometrical and hydraulic properties of the reach
	LEN	length of reach
	DELTH	drop in water elevation used for reaeration and sediment transport relations only
	STCOR	stage correction to obtain stage from depth
	KS	weighting factor for hydraulic routing
	DB50	median diameter of bed sediment
	VOL	initial volume of water in the reach
	COLIND	indicates pair of columns for outflow exit computation
PERLND and IMPLND (SNOW)	ICEFG	flag: 1 - ice formation in snowpack is simulated 0 - ice formation in snowpack is ignored
	LAT	latitude of the land segment
	MELEV	mean elevation of land segment
	SHADE	fraction of land segment shaded from solar radiation
	SNOWCF	factor to account for undermeasurement of snowfall
	COVIND	snowpack depth required to completely cover land segment

Table L-2
HSP-F Parameter Description - 5

<u>Module</u>	<u>Parameter Name</u>	<u>Description</u>
PERLND and IMPLND (SNOW) (cont)	RDCSN	density of new snow
	TSNOW	air temperature below which precipitation is snow
	SNOEVP	parameter to control sublimation
	CCFACT	parameter which controls condensation/convection melting
	MWATER	maximum water content of snowpack
	MGMELT	maximum rate of snowmelt by ground heat
	Pack-snow	initial quantity of snow in the pack
	Pack-ice	initial quantity of ice in the pack
	Pack-watr	initial quantity of liquid water in the pack
	RDENPF	density of the frozen contents of the pack
	DULL	index of dullness of the pack surface
	PACKTMP	mean temperature of the frozen contents of the pack
	CONVINX	current pack required for complete areal coverage
	XLNMLT	current remaining possible increment to ice storage in the pack
	SKYCLR	initial fraction of sky which is assumed to be clear

TABLE L-3SIGNIFICANT HSP-F PARAMETERS
FOR THE BLACK CREEK BASIN

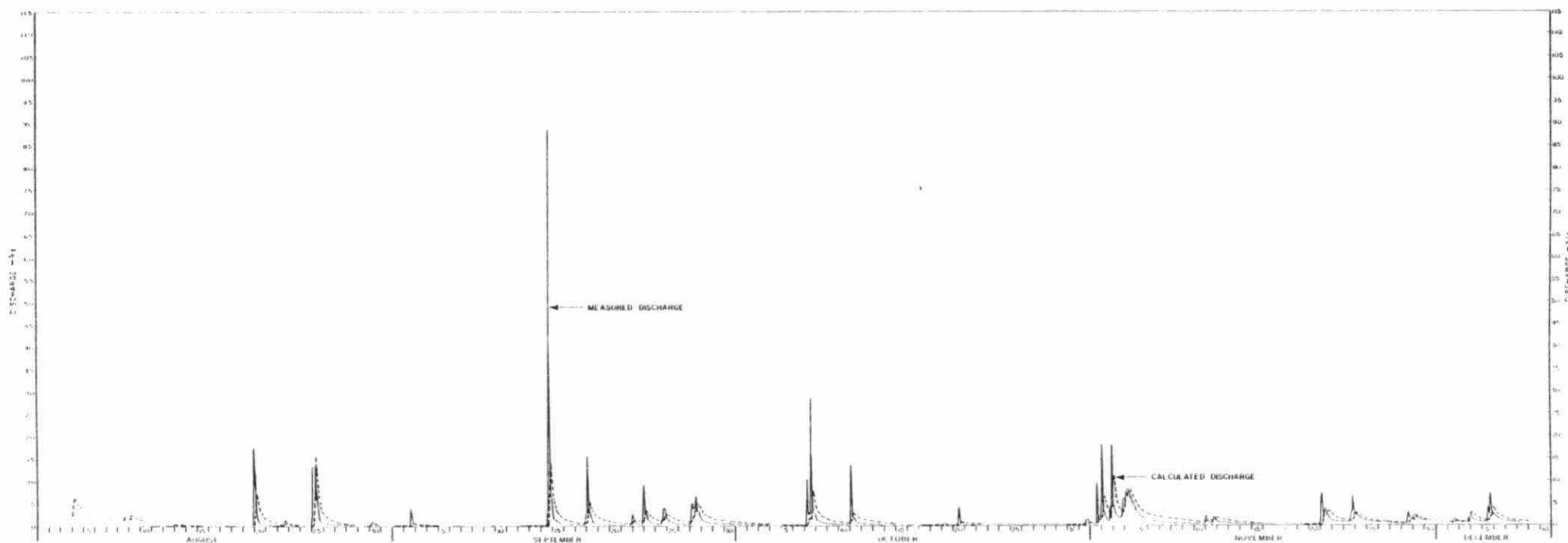
<u>Significance</u>	<u>Module</u>	<u>Parameter</u>
Primary	IMPLND	LSUR
	IMPLND	SLSUR
	IMPLND	NSUR
Secondary	PERLND	AGWRC
	PERLND	CEPSC
	IMPLND	RETSC
Tertiary	PERLND	UZS
	PERLND	LZS
	PERLND	LZSN
	PERLND	UZSN
	PERLND	AGWS
	PERLND	LSUR
	PERLND	SLSUR
	PERLND	NSUR
	PERLND	INFILT



ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 5 INITIAL HSPF RUN

FIG. L-4





ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 5 HSPF RUN FOR DECREASED RESPONSIVENESS TO IMPERVIOUS OVERLAND FLOW

FIG. L-5



Interception storage on the pervious land segments and retention storage on the impervious land segments influenced the total volume of runoff but had only a minor effect on hydrograph "peakiness". During minor rainfall periods, it was possible to simulate no increase in river discharge by increasing the retention and interception storage. As expected, changes in these two parameters did not significantly affect the hydrograph for major rain events.

(c) Tertiary Significance

The infiltration parameter had a larger influence than the other parameters in this category. This parameter controls the relative amount of water which either enters the soil layers or remains on the surface and is thus available for overland flow routing.

The soil moisture indicators for the upper and lower zones and for the groundwater had a minor effect on the overall calibration.

The overland flow parameters for the pervious land segment were not particularly significant primarily because of the insignificant contribution of surface pervious runoff during the relatively minor floods contained in the simulation period.

The sensitivity to some parameters was not investigated for the following reasons.

- The parameters added increased complexity to the algorithms which was not justified.
- The parameters allowed for overall adjustments which could also be made by alternative parameter variations.

4.1.2 - Humber River Calibration

The calibration of HSP-F for the Humber River was dominated by the fact that only the lower part of the Humber River Basin was being modeled. The HSP-F simulated runoff from the Lower Humber River Basin was small compared to inflow from the upper part of the basin. The calibration of HSP-F for the Lower Humber River Basin relied heavily on information learned about local conditions during the calibration of Black Creek.

Initially, the final calibrated parameters from the Black Creek calibration (see Table L-1) formed the basis for the first Humber River simulation run. The first few simulation runs revealed two problems which required changing the input data. These problems are as follows.

(a) Water Balance Anomaly

It was discovered that the sum of the upstream discharges was, at times, greater than the recorded downstream discharge. It appeared that, somewhere within metropolitan Toronto, water was being abstracted from the Humber River. Investigation of the historic daily mean discharge record revealed that there were approximately 400 occurrences of upstream discharge exceeding downstream discharge, between 1971 and 1981. Some of these occurrences were during flood flows and could be attributed to time lags between gauges. However, the vast majority of occurrences were during low flows when steady-state conditions prevailed. The quantity of water apparently abstracted was as large as 2 m³/s. The following points are possible explanations for the anomaly. Some of these explanations can be readily eliminated while others remain as questions to be answered.

- The discrepancy could be due to errors in WSC rating curves which interact to indicate a loss of water which, in fact, does not exist. This possibility was rejected

because of the long-term development of rating curves by WSC and because of the apparent repeatability of the discharge measurements used in developing the curves.

- The magnitude of water abstractions and occurrences in all four seasons indicates that irrigation consumption is not a factor.
- The magnitude of the abstractions and the quality of the water taken make it unlikely that industrial withdrawal and consumption could explain the losses. There is no knowledge of any significant abstraction from the river for industrial purposes.
- The water loss could be due to leakage into and through the porous channel bottom. This flow would, of course, not be measured by a WSC streamflow gauge.
- The water loss could be due to leakage into sewers which either parallel the river or cross it at several locations. In order to be a valid explanation, these sewers must not discharge to the river above the downstream WSC gauge at Site 7 (either as storm sewer or sanitary sewer outflow).

In the absence of further information on the apparent water abstraction anomaly, simple adjustments to the upstream flow data were made to allow for calibration of the model.

Upstream abstractions were introduced for the main Humber River and the West Humber River. These abstractions were $0.5 \text{ m}^3/\text{s}$ for the West Humber River and $1.5 \text{ m}^3/\text{s}$ for the main Humber River. These abstractions are assumed to be constant for river flows over $2 \text{ m}^3/\text{s}$ and are assumed to rise linearly from zero, at a zero river flow.

(b) Spatial Variation
of Infiltration

It was necessary to vary the infiltration rates for the pervious land segments based on the soil characteristics of the land segment. The Soil Conservation Service (SCS) soil characteristics were used to evaluate the variation. These classifications were obtained from a map contained in an earlier hydrologic study of the basin.* The SCS classifications are as follows.

<u>Class</u>	<u>Description</u>
A	Soils having high infiltration rates such as well drained sands or gravel
B	Soils having moderate infiltration rates such as fine sand loams
C	Soils having slow infiltration rates such as soils with a layer which impedes infiltration or soils with a fine texture
D	Soils having very slow infiltration rates such as clay soils

Table L-4 lists the land segments and the soil types within that segment, together with the infiltration rates which were used in the simulation runs. In some cases, there are

*"Report on Hydrologic Model Study - Humber, Don and Rouge Rivers, Highland, Duffin, Petticoat and Carruther's Creeks", for the Metropolitan Toronto and Region Conservation Authority, October 1979, by James F. MacLaren Ltd.

TABLE L-4

SCS SOIL TYPES AND INFILTRATION
RATES FOR HSP-F LAND SEGMENTS

<u>Land Segment</u>	<u>Soil Types*</u>	<u>Infiltration</u> (mm/h)
1	AB, <u>C</u> , D	4.0
2	C	4.0
31	AB, <u>C</u> , D	4.0
34	AB, <u>C</u> , D	4.0
35	BC, <u>C</u> D = <u>CD</u>	2.5
36	AB, D = <u>C</u>	4.0
37	D	0.2
50	C	4.0
51	C, D = <u>CD</u>	2.5
52	C	4.0
53	AB, <u>D</u>	0.2
54	D	0.2
55	D	0.2
56	D	0.2
90	D	0.2
91	D	0.2
92	AB, D = <u>C</u>	4.0
93	AB, D = <u>C</u>	4.0
94	D	0.2

*Underlining indicates the predominant class where several are listed.

several soil types within a land segment. The infiltration rate for the predominant or subjective average soil type was selected. The nominal rates used for each soil type are as follows

AB - 10.0 mm/h
C - 4.0 mm/h
D - 0.2 mm/h.

Table L-5 lists the overland flow lengths which were used for both the impervious and pervious components of each land segment. In addition, this table lists values for the groundwater recession constants and the interflow recession parameters. The values for both of these parameters were increased for the largely rural land segments at the upstream end of the simulated portion of the basin.

Table L-6 lists the monthly variation of interception storage and Manning's n for overland flow for the pervious land segments. There is a minor difference in the value for n in the largely rural pervious land segments as the fall season progresses.

Figures M-3, M-4, M-5, M-6, M-7 and M-8, Appendix M, show a comparison between simulated and measured discharges at Sites 3, 6, 7, 8, 9 and 10 respectively. Measured flows were available only during the sampling periods at Sites 3, 6, 8, 9 and 10, and consequently the comparison at these stations was of only minor assistance in calibrating the model. The WSC gauge at Site 7 stopped operating on October 23, 1982, for approximately 1.5 months and consequently the period of continuous overlap between measured and calculated discharge was much shorter than it was for the Black Creek calibration. The comparison which is available is generally very good except for a few isolated events. Unfortunately, one of these was the third wet event. An examination of the rainfall record showed that the rainfall gauges measured very little rain when in fact runoff from the

TABLE L-5

OVERLAND FLOW LENGTHS AND INTERFLOW
AND GROUNDWATER RECESSION CONSTANTS

Land Segment	Impervious	Pervious		
	LSUR (m)	LSUR (m)	AGWR (1/d)	IRC (1/d)
1	1500	50	0.8	0.001
2	1500	50	0.8	0.001
31	800	50	0.8	0.001
34	800	50	0.8	0.001
35	1500	50	0.8	0.001
36	800	50	0.8	0.001
37	800	100	0.8	0.001
50	500	50	0.8	0.001
51	300	50	0.8	0.001
52	1000	50	0.8	0.001
53	2000	50	0.8	0.001
54	3000	50	0.8	0.001
55	1000	100	0.8	0.001
56	500	50	0.8	0.001
90	na*	1500	0.95	0.1
91	na	1500	0.95	0.1
92	na	1500	0.95	0.1
93	na	1500	0.95	0.1
94	na	1500	0.95	0.1

*na - not applicable.

TABLE L-6

MONTHLY VARIATION IN MANNING'S n
AND INTERCEPTION STORAGE
FOR PVIOUS LAND SEGMENTS

<u>PERLND</u>	<u>Parameter</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>
30 to 94	CEPSC (mm)	2.0	2.0	1.5	1.0
30 to 56	NSUR	0.25	0.25	0.20	0.20
90 to 94	NSUR	0.25	0.25	0.20	0.15

basin indicates a moderate rainfall. Rainfall gauge density varied over time, and during the third wet event, only the Toronto International Airport AES recording gauge was operating. Other precipitation data were available from the nonrecording gauges. This sparse precipitation data set is likely not a very reliable indicator of basin precipitation.

4.1.3 - Winter Calibration

Calibration of HSP-F for the winter and spring of 1982/83 was carried out in a manner similar to the fall. The fall calibration was used as a starting point for the winter calibration. Only changes in parameter values which could be physically justified were considered. A two-phase approach to calibration (Black Creek first and then the Humber River) was again used.

(a) Black Creek Calibration

The major change in HSP-F for the winter simulation was the addition of the SNOW section. Calibration of HSP-F began using values from the final fall calibration wherever possible.

It was immediately obvious that the fall calibration caused too much "peakiness" in the hydrograph and too slow a base flow recession. This was corrected as follows.

- Manning's n for the impervious land segments was increased and made to vary monthly over the winter. The increase is justified because it reflects the rougher surface conditions of roads and parking lots when they are covered with sand and melting snow. Manning's n for the pervious land segments was made constant over the winter because monthly variation could not be physically justified.

- The groundwater recession parameter was increased in order to cause a faster decrease in the falling limb of the hydrograph and a lower base flow contribution. This change in the calibration from the fall is harder to justify physically, and demonstrates the need for the simulation to be run on an annual or multiyear basis so that seasonal trends, particularly in the groundwater, may be observed.

Final calibration values of parameters which changed from, or were not used in, the fall calibration of Black Creek are given in Table L-7. It should be noted that the winter of 1982/83 did not have much snowfall and, therefore, the sensitivity of the parameters in the SNOW section could not be thoroughly investigated.

The final winter hydrograph for Site 5 is shown in Figure M-11. The simulated discharges match the historical WSC records quite well.

(b) Humber River Calibration

The calibration of the Humber for the winter again relied heavily on the final results from the winter Black Creek calibration. All of the final winter Black Creek parameter values were used for the Humber simulations.

When HSP-F was initially calibrated for the fall on the Humber, a water balance anomaly was recognized which necessitated extractions from the river. During the winter, this anomaly was not apparent, and thus the extractions were unnecessary. This behavior of the basin further emphasizes the need for annual or multiyear simulation to examine seasonal trends.

TABLE L-7

HSP-F WINTER PARAMETERS
FOR BLACK CREEK

<u>Module</u>	<u>Parameter</u>	<u>Initial Value</u>	<u>Range Tested</u>	<u>Final Value</u>
PERLND	CSNOFG	1	1	1
	ICEFG	1	1	1
	LAT (deg)	44.33	44.33	44.33
	MELEV (m)	122	122	122
	SHADE	0.3	0.3	0.3
	SNOWCF	1.0	1.0	1.0
	CONVIND (mm)	10.0	1.0 - 10.0	10.0
	RDCSN	0.15*	0.15*	0.15*
	TSNOW (°C)	0.0*	0.0*	0.0*
	SNOEVP	0.1*	0.1*	0.1*
	CCFACT	1.0*	1.0*	1.0*
	MWATER	0.03*	1.03*	0.03*
	MGMELT (mm/d)	0.25*	0.25*	0.25*
	Pack-snow (mm)	0.0*	0.0*	0.0*
	Pack-ice (mm)	0.0*	0.0*	0.0*
	Pack-watr (mm)	0.0*	0.0*	0.0*
	RDENPF	0.2*	0.2*	0.2*
	DULL	400	400*	400*
	PAKTMP (°C)	0.0*	0.0*	0.0*
	CONVINX (mm)	0.25*	0.25 - 10.0	0.25*
	XLNMLT (mm)	0.0*	0.0*	0.0*
	SKYCLR	1.0*	1.0*	1.0*
	AGWRC (1/d)	0.80	0.80 - 1.0	0.98
	NSUR	0.20	0.1 - 0.3	0.20
	CEPS (mm)	2.0	***	2.0
	UZS (mm)	8.0	***	8.0
	LZS (mm)	144.0	***	144.0
	AGWS (mm)	6.0	***	6.0
IMPLND	NSUR	0.02	0.01 - 0.4	**

Same values for all snow parameters as in PERLND.

* Default value.

** Monthly variation as given below.

***Final storages from fall simulations.

<u>IMPLND</u>	<u>Parameter</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>
1 - 2	NSUR	0.10	0.10	0.20	0.20	0.06	0.02

Figure M-13 shows the final winter calibration at Site 7, where there is also a WSC discharge gauge. The fit between HSP-F simulated flows and the historical flows is good, with many of the discrepancies probably due to the spatial variation of precipitation. Figures M-10, M-12, M-14, M-15, M-16 and M-18 show HSP-F simulated discharge at Sites 3, 6, 8, 9, 10 and 12, respectively. Spot discharge measurements which were taken during the spring sampling program are also included.

APPENDIX M

HSP-F GENERATED DISCHARGES
AND RSF CONCENTRATIONS

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<u>Figure Number</u>	<u>Title</u>
Figure M-1	Site No. 5 Final HSP-F Run Fall 1982
Figure M-2	Site No. 11 Final HSP-F Run Fall 1982
Figure M-3	Site No. 3 Final HSP-F Run Fall 1982
Figure M-4	Site No. 6 Final HSP-F Run Fall 1982
Figure M-5	Site No. 7 Final HSP-F Run Fall 1982
Figure M-6	Site No. 8 Final HSP-F Run Fall 1982
Figure M-7	Site No. 9 Final HSP-F Run Fall 1982
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Figure M-9	Site No. 3 Humber River at Bloor Street
Figure M-10	Site No. 5 Black Creek at Scarlett Road Bridge
Figure M-11	Site No. 6 Humber River Near Scarlet Road
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Figure M-15	Site No. 10 Humber River Above Steeles Avenue
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Figure M-18	Site No. 3 Simulated RSF Fall 1982
Figure M-19	Site No. 5 Simulated RSF Fall 1982
Figure M-20	Site No. 7 Simulated RSF Fall 1982
Figure M-21	Site No. 9 Simulated RSF Fall 1982

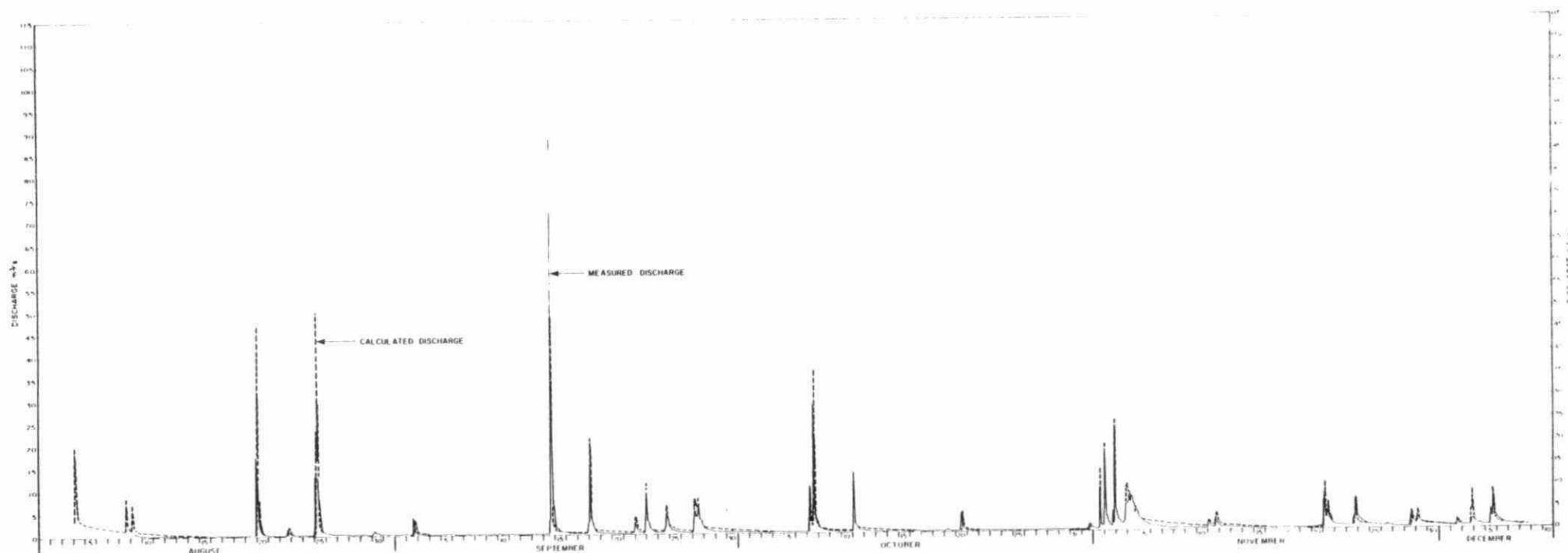
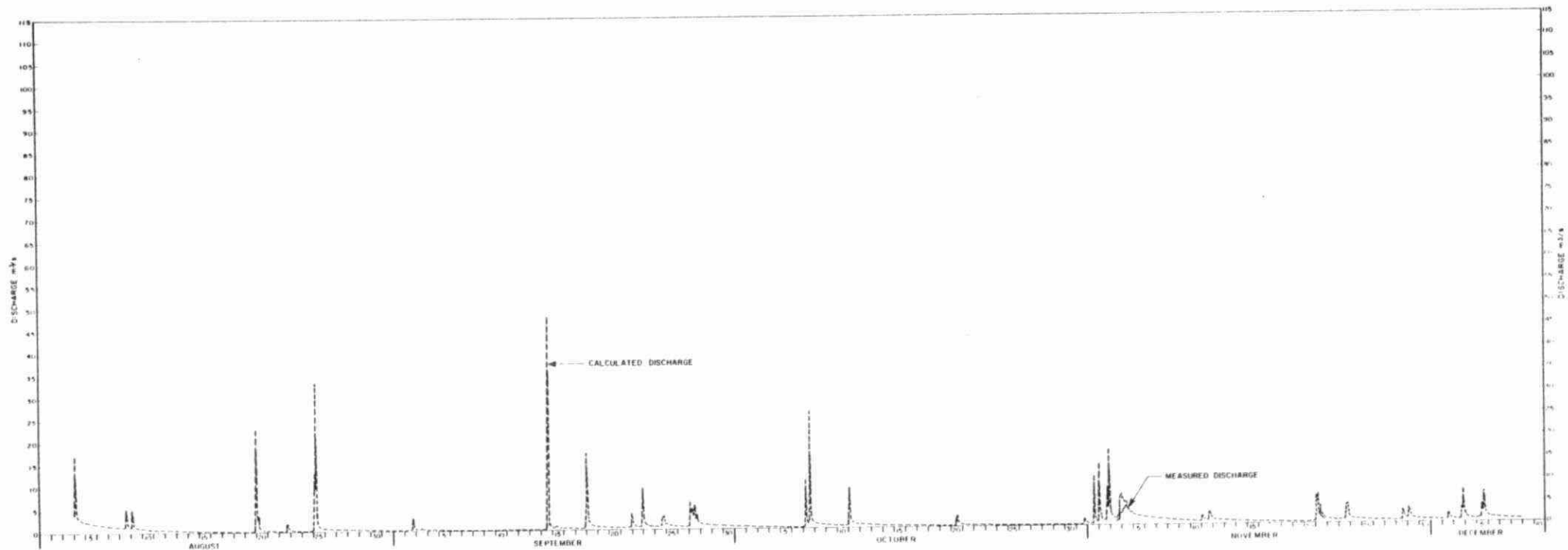


FIG. M-1

ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 5 FINAL HSPF RUN FALL 1982

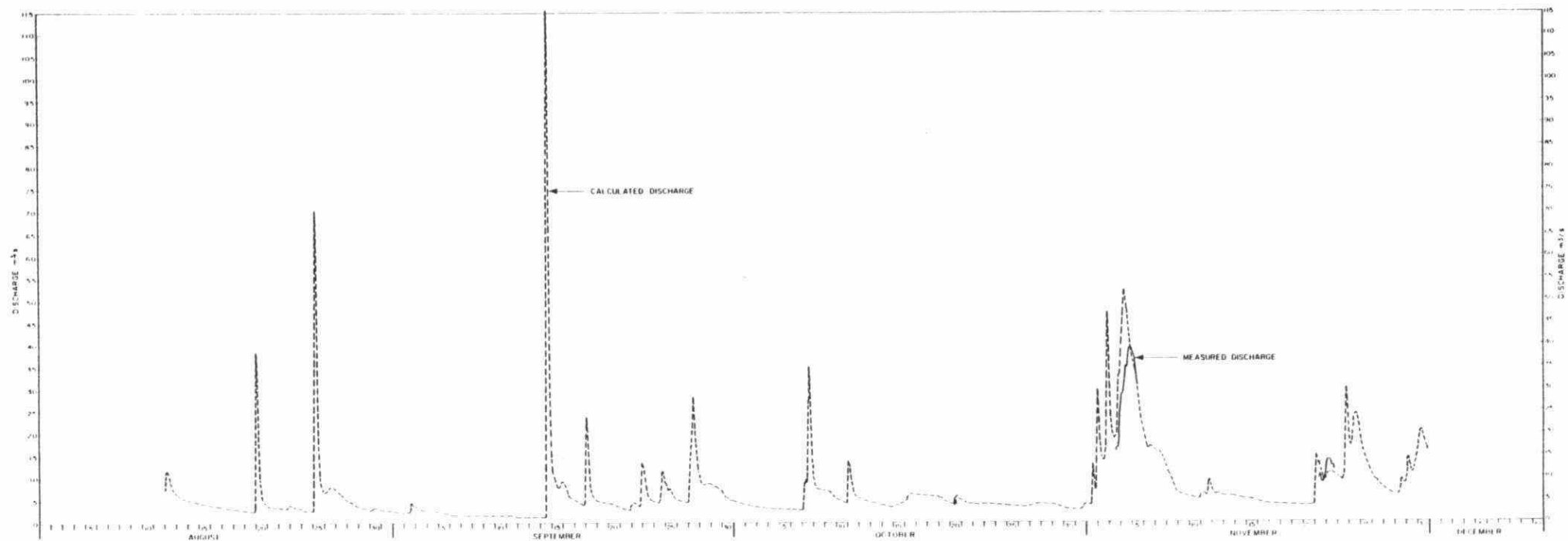




ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 11 FINAL HSPF RUN FALL 1982

FIG.M-2

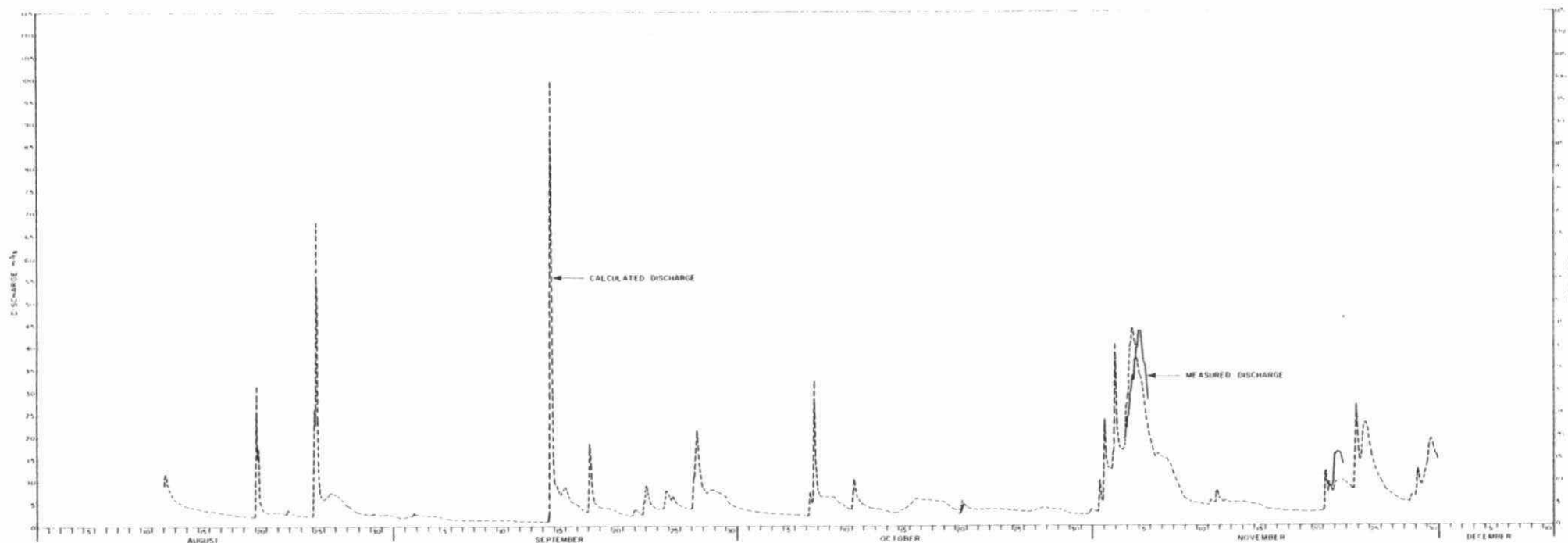




ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
SITE No. 3 FINAL HSPF RUN FALL 1982

FIG. M-3

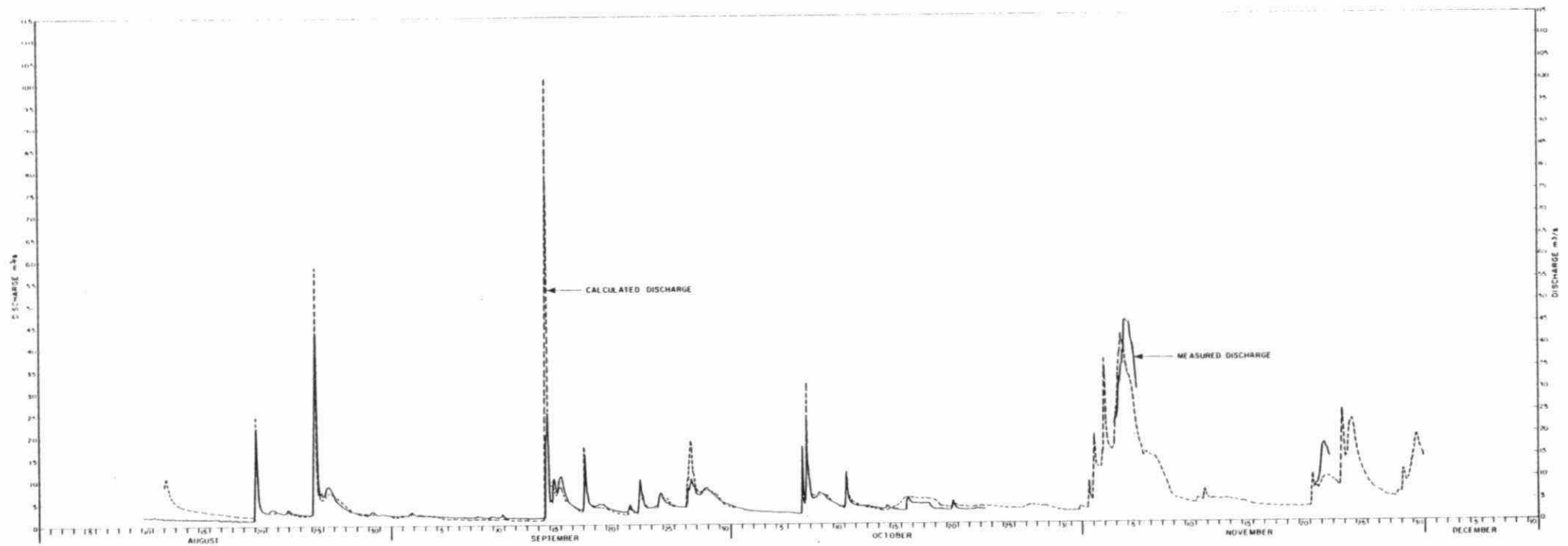




ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 6 FINAL HSPF RUN FALL 1982

FIG. M-4

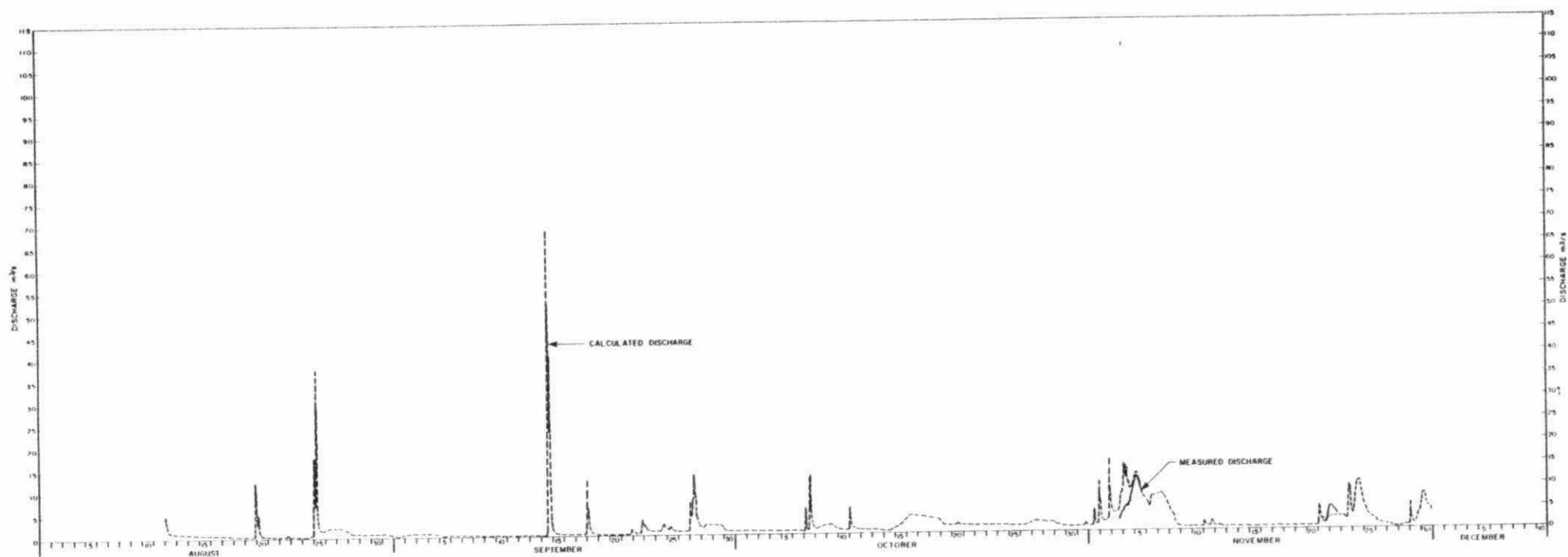




ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 7 FINAL HSPF RUN FALL 1982

FIG.M-5

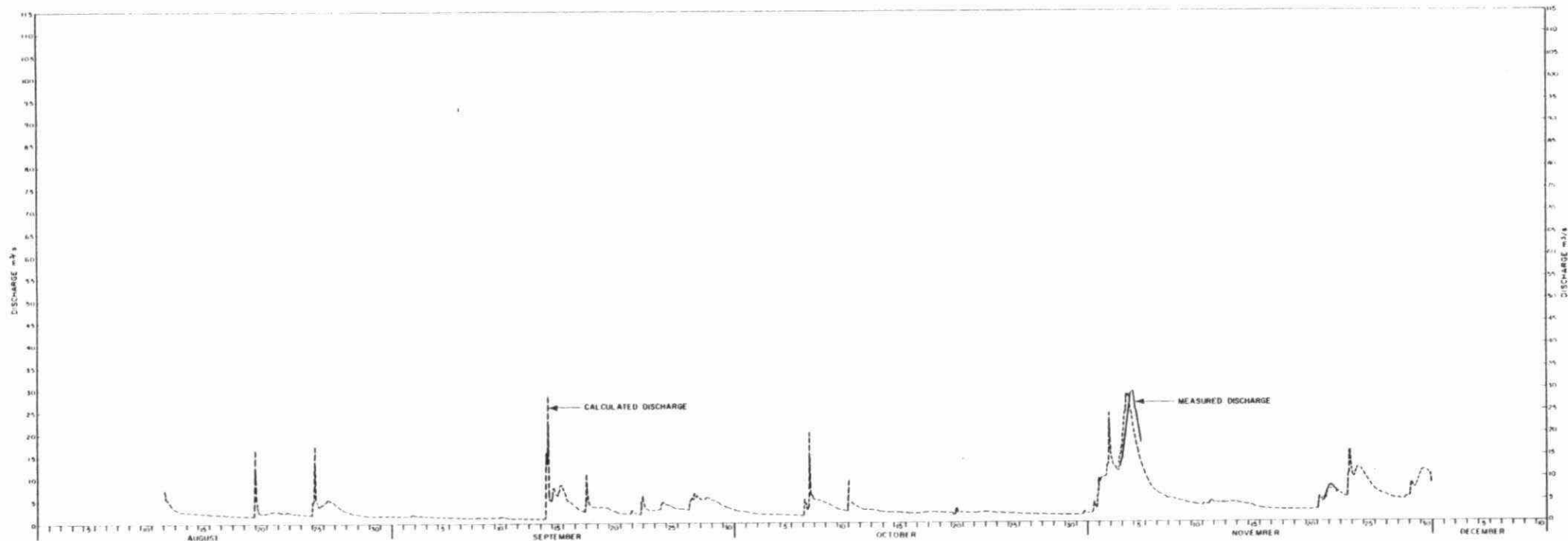




ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 8 FINAL HSPF RUN FALL 1982

FIG. M-6

ACRES



ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 9 FINAL HSPF RUN FALL 1982

FIG. M-7



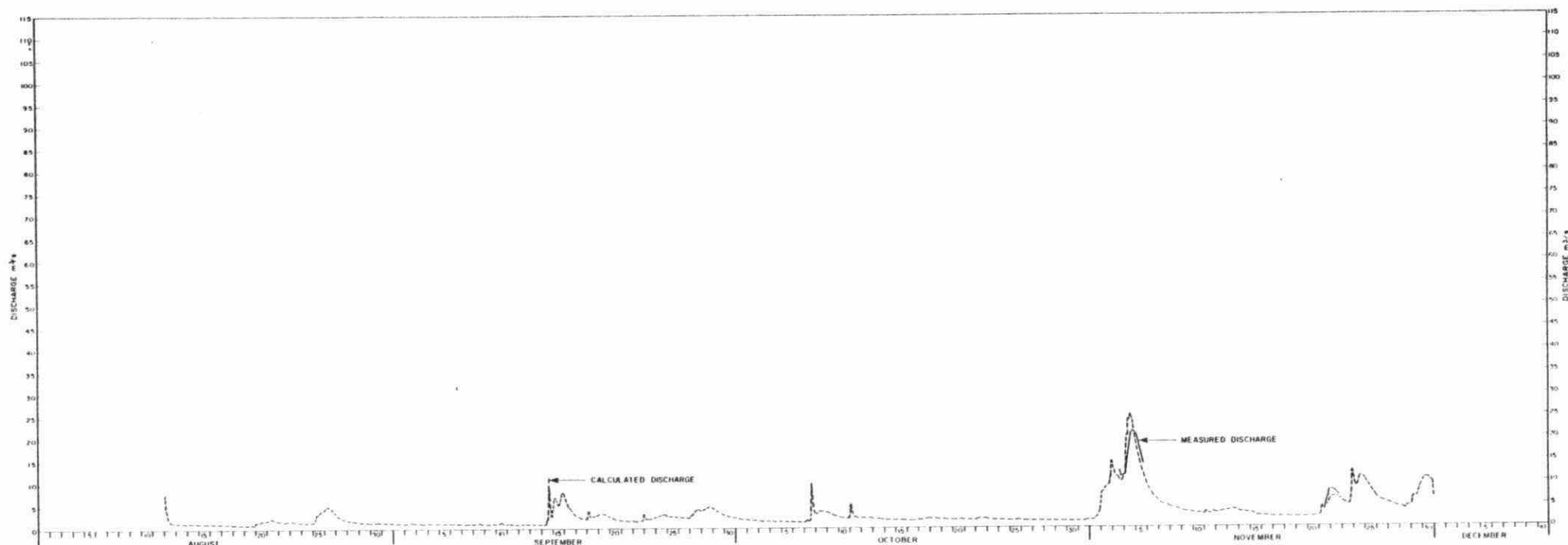
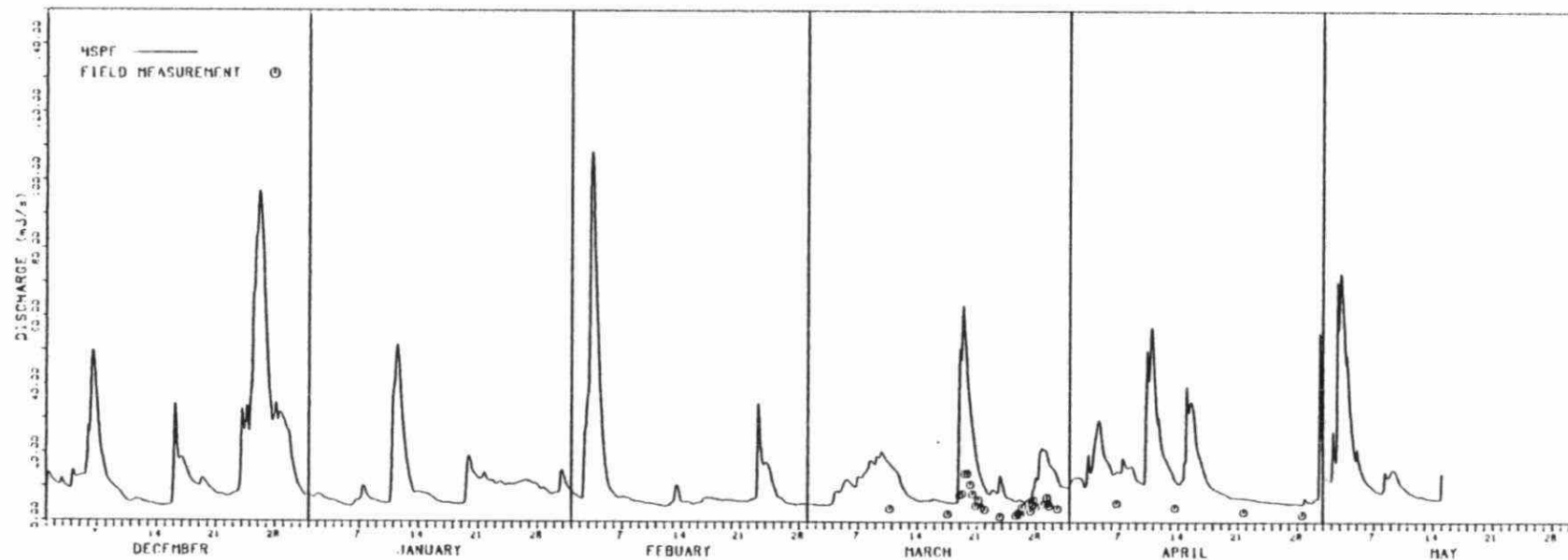


FIG. M-8
 ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY - TAWMS 82
 SITE No. 10 FINAL HSPF RUN FALL 1982





NOTE :

FIELD MEASUREMENTS UNRELIABLE
BECAUSE OF PROBLEM WITH RATING CURVE.

FIG.M-9

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No. 3 HUMBER RIVER AT BLOOR STREET



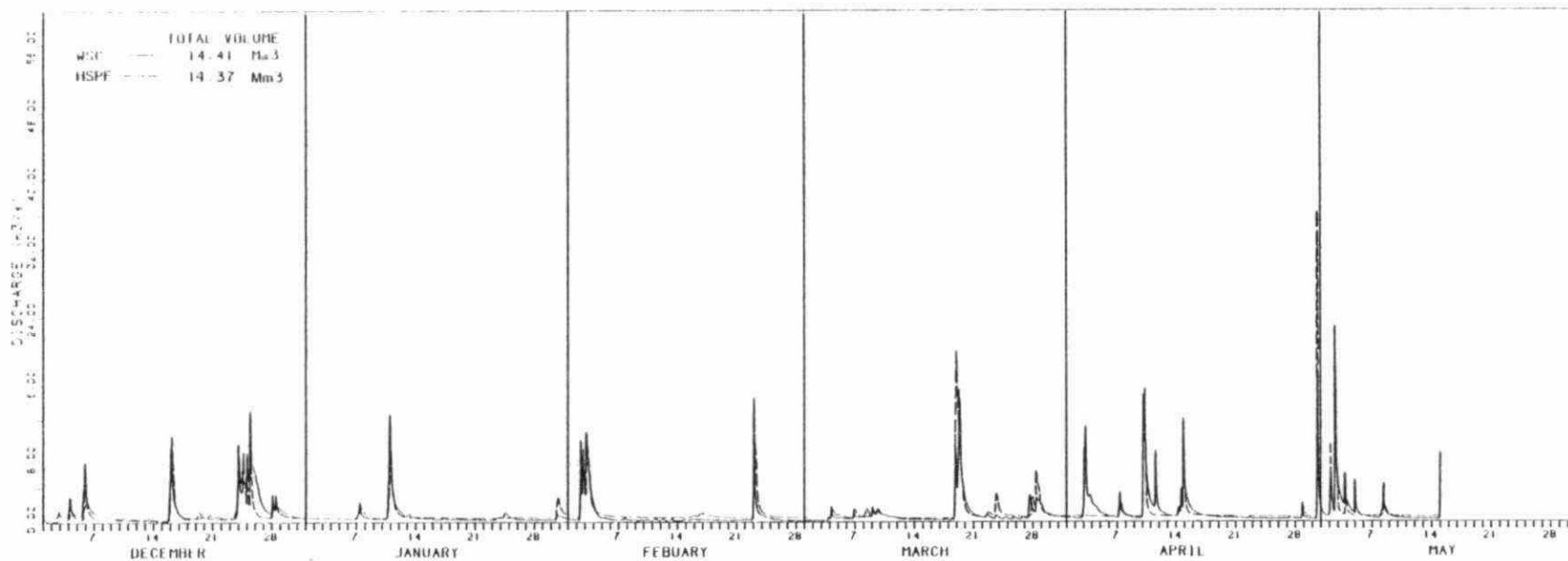


FIG. M-10

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No. 5 BLACK CREEK AT SCARLETT ROAD BRIDGE



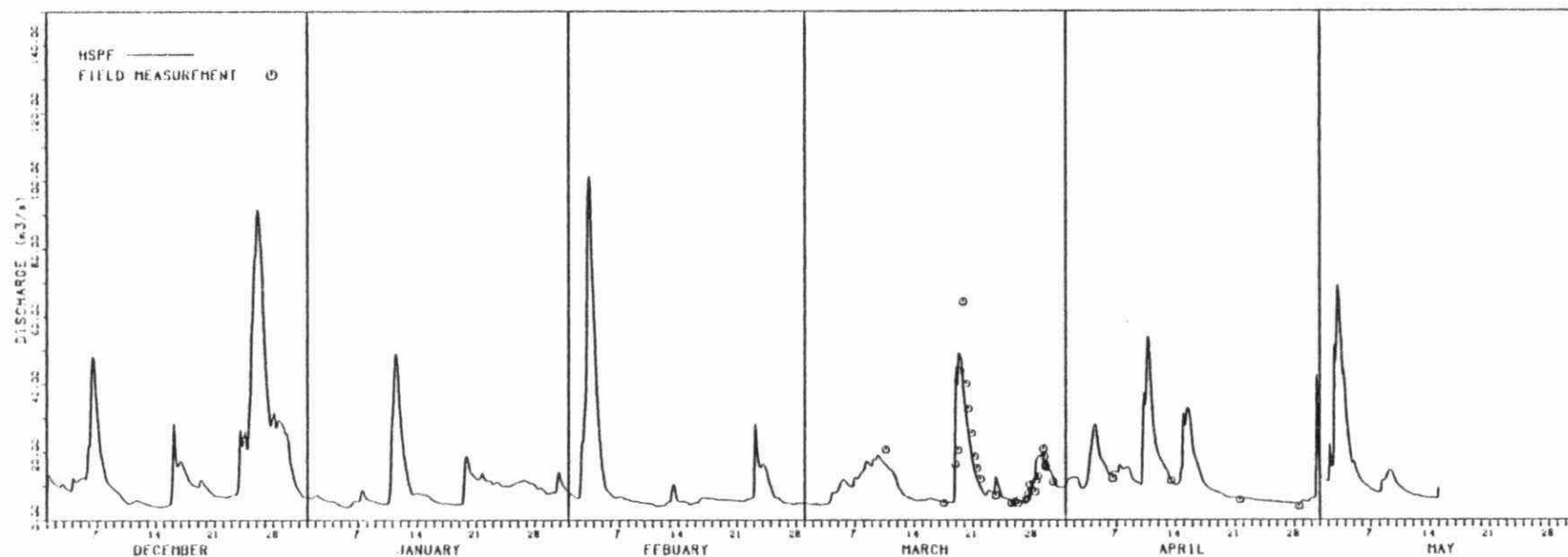


FIG. M-11

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82

SITE No. 6 HUMBER RIVER NEAR SCARLET ROAD

ACRES

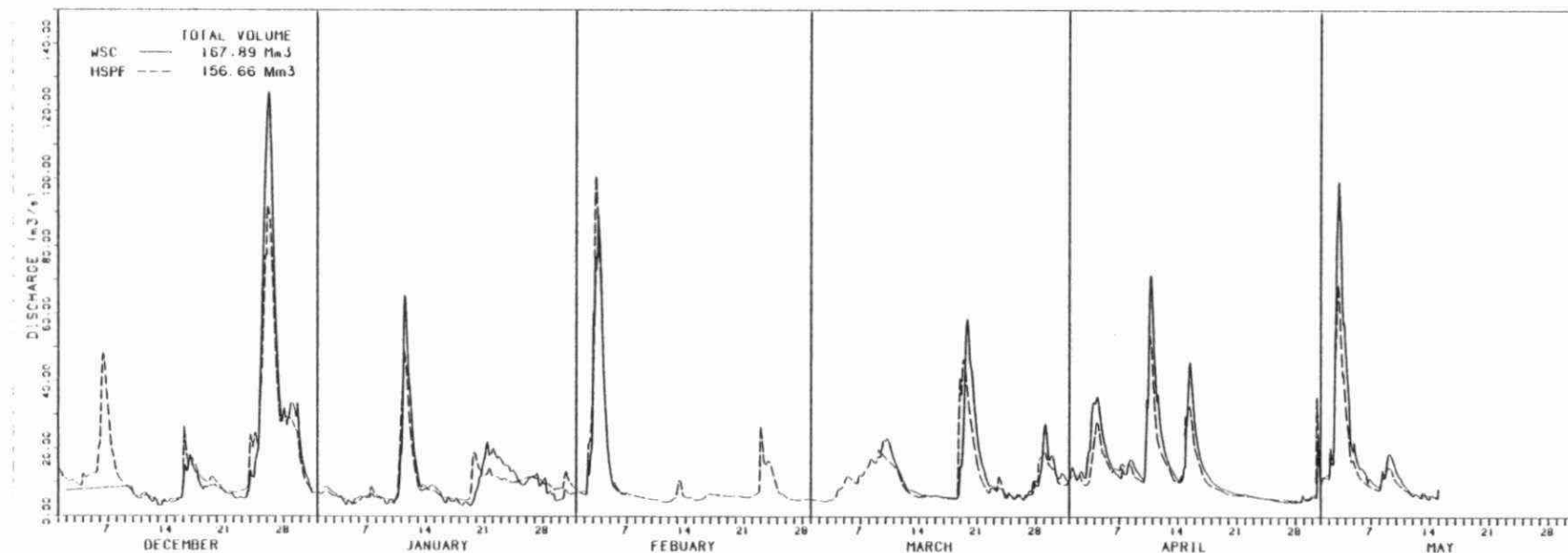


FIG. M-12

ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
 SITE No. 7 HUMBER RIVER NEAR LAWRENCE AVENUE



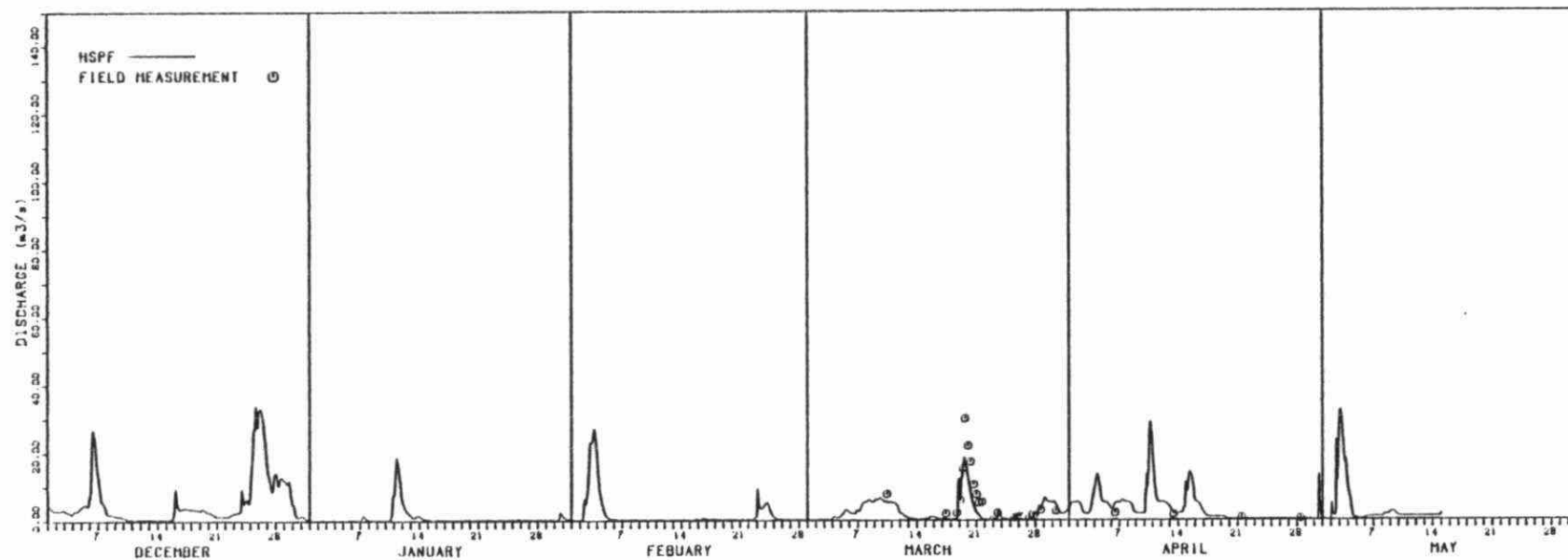


FIG. M-13

ONTARIO MINISTRY OF ENVIRONMENT
 TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82

SITE No. 8 WEST HUMBER NEAR CONFLUENCE WITH HUMBER RIVER



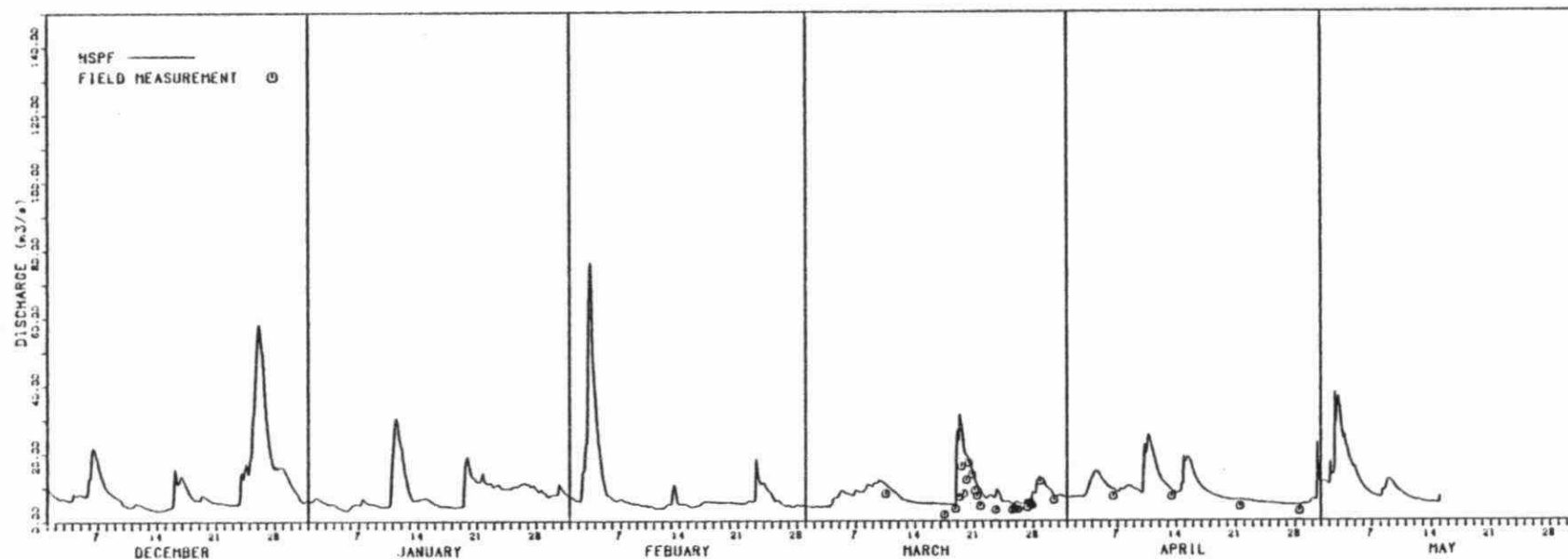


FIG.M-14

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82

SITE No. 9 HUMBER RIVER NEAR CONFLUENCE WITH WEST HUMBER



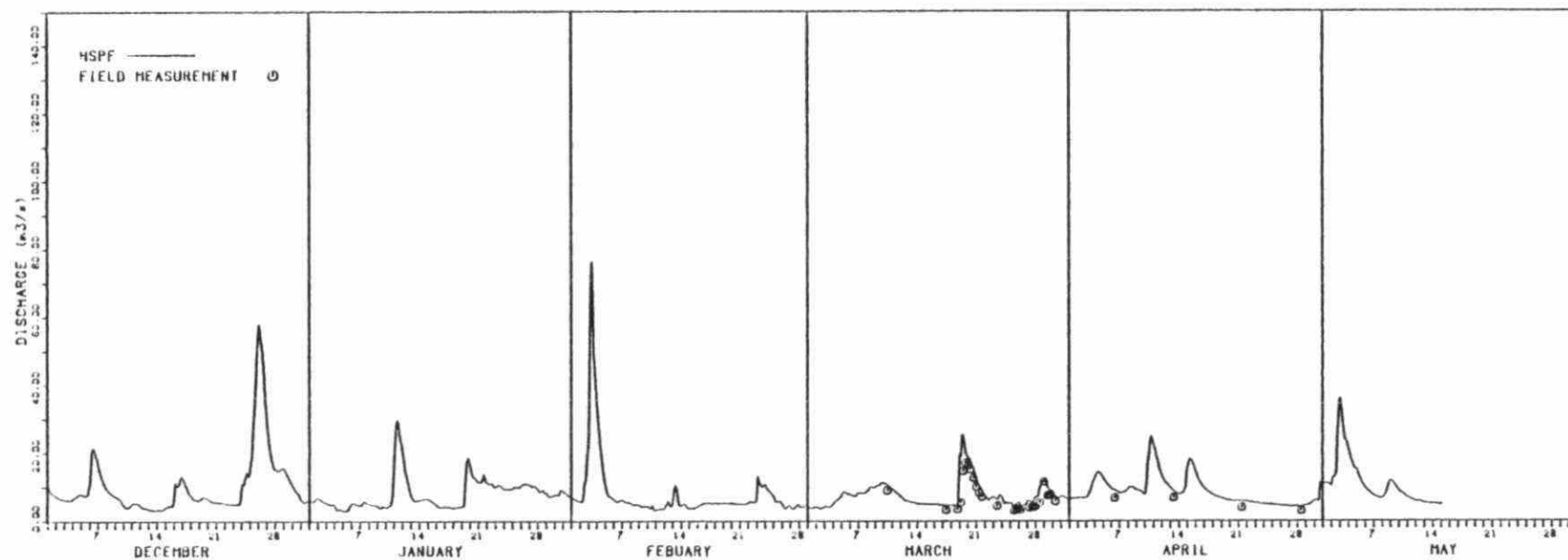


FIG. M-15

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No. 10 HUMBER RIVER ABOVE STEELES AVENUE



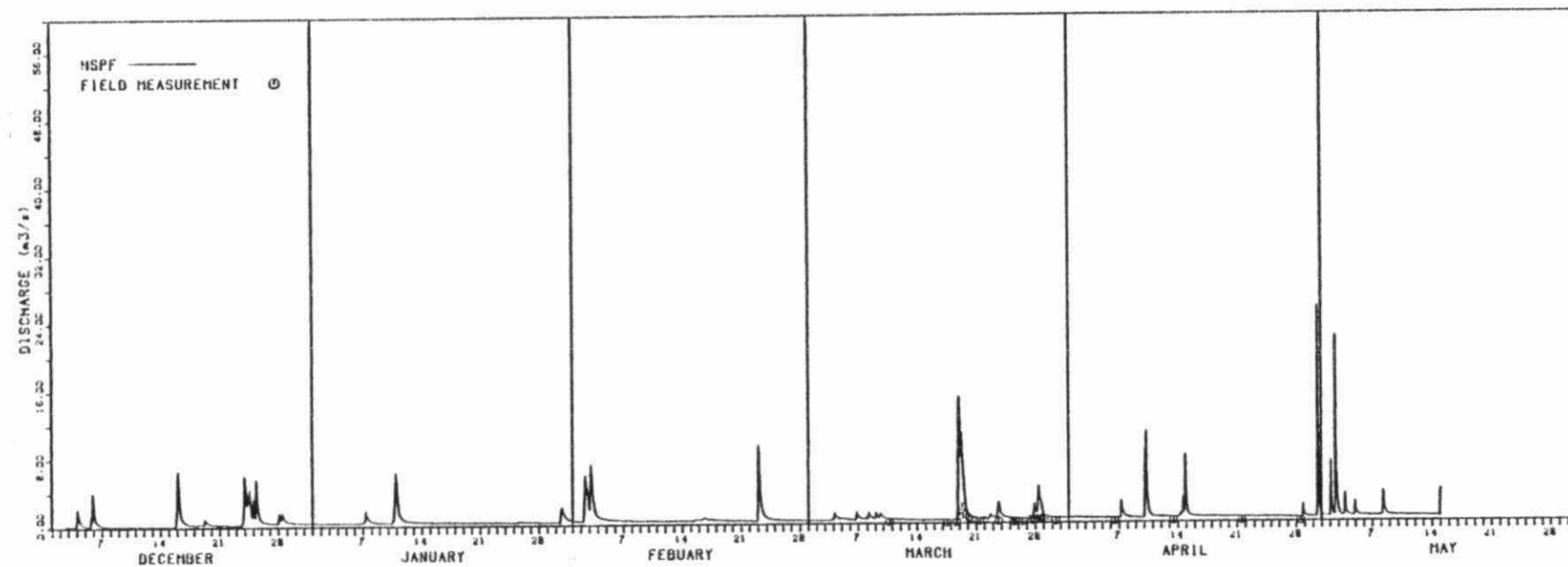


FIG.M-16

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82

SITE No. 11 BLACK CREEK NEAR LAWRENCE AVENUE AND BLACK CREEK DRIVE



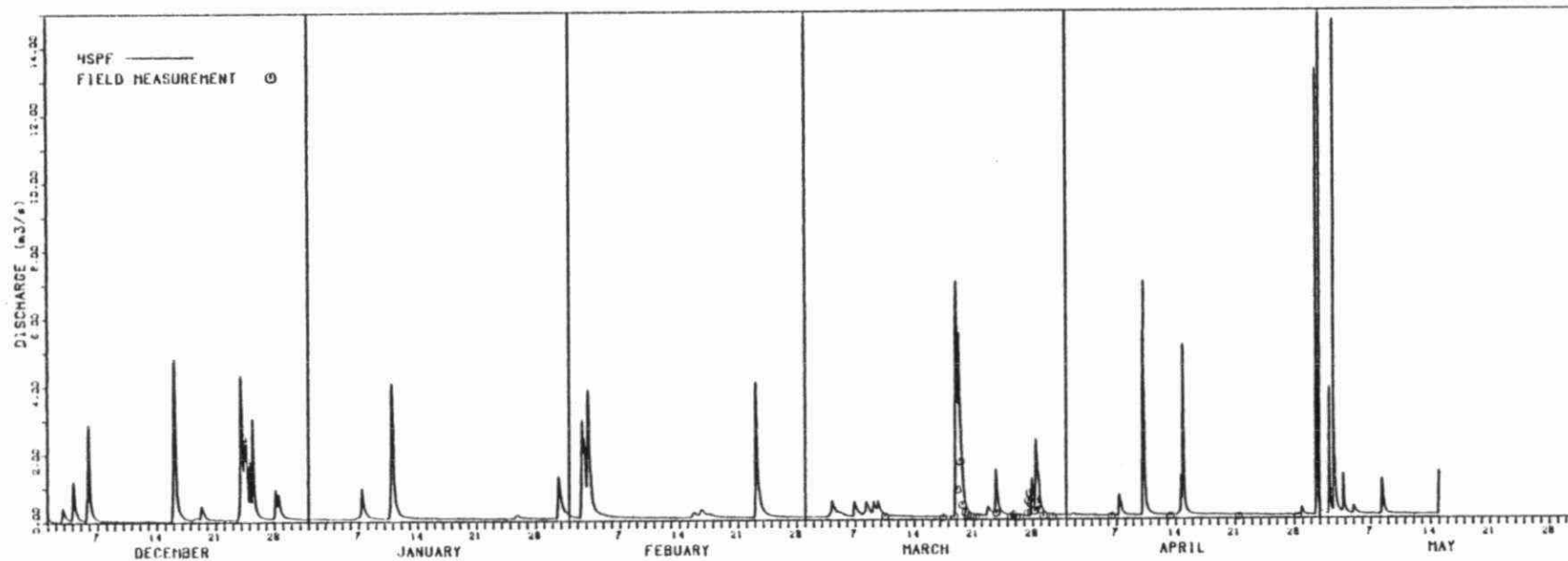


FIG.M-17

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No. 12 COOK CREEK AT WESTON ROAD



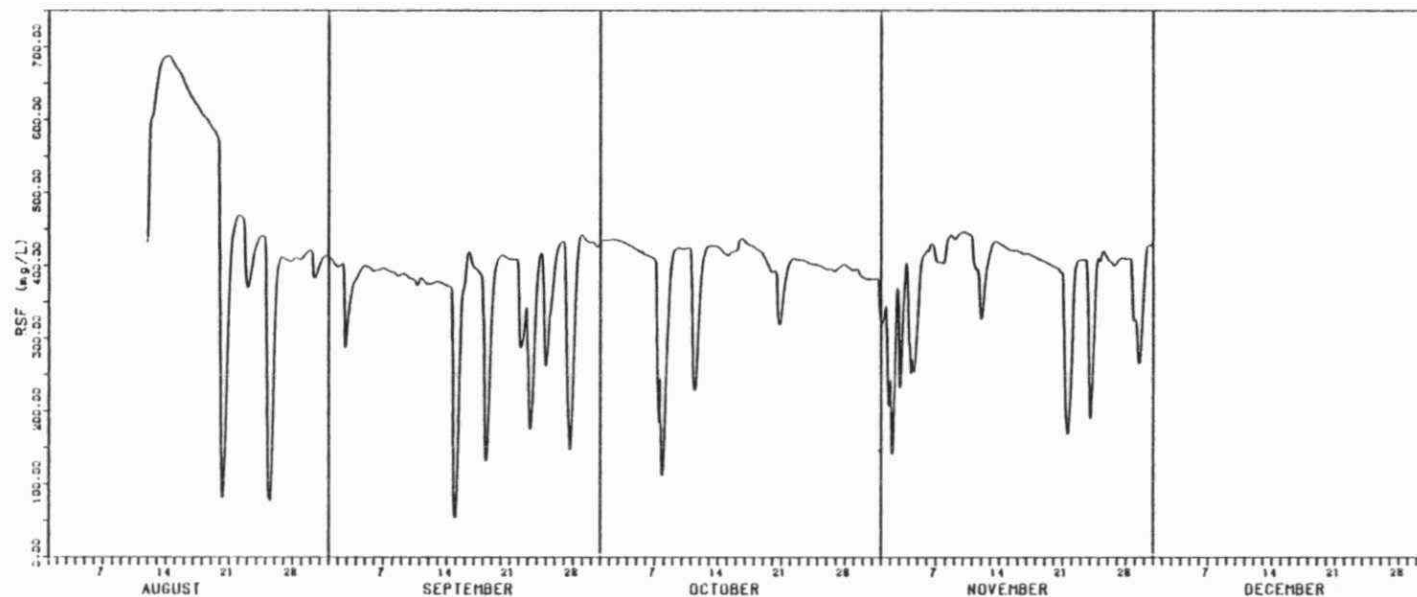


FIG. M-18

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82

SITE No. 3 SIMULATED RSF FALL 1982



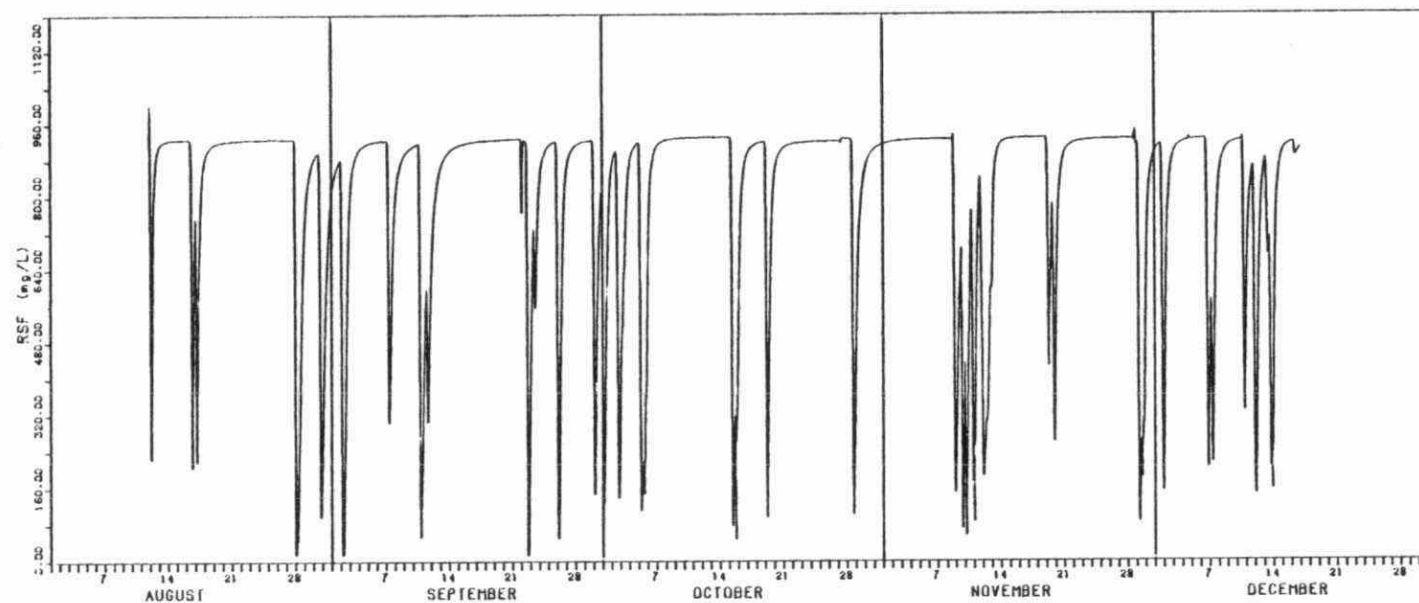


FIG. M-19

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No.5 SIMULATED RSF FALL 1982



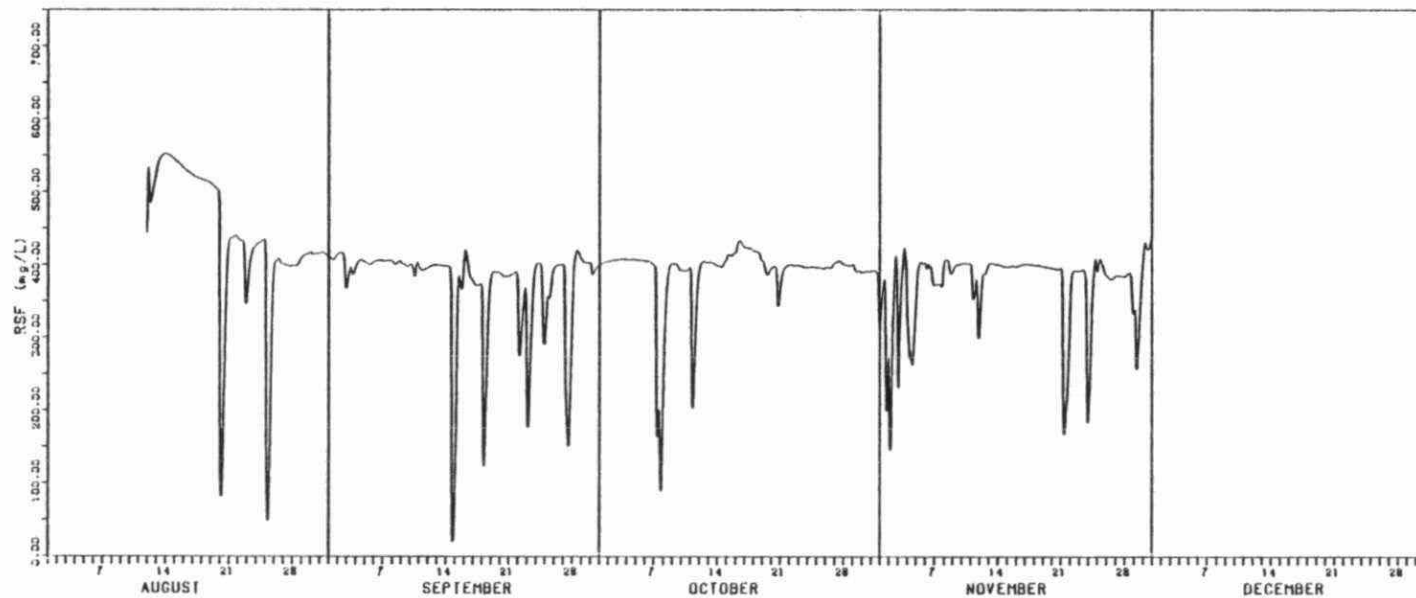
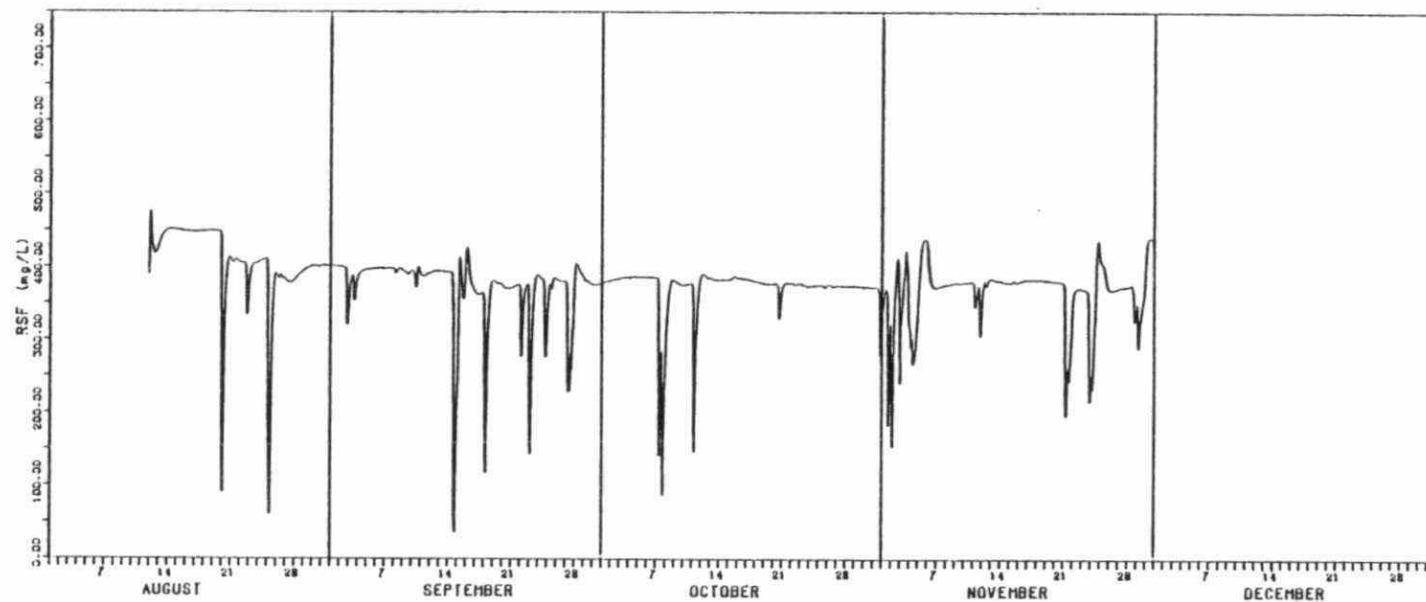


FIG.M-20

ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No. 7 SIMULATED RSF FALL 1982





ONTARIO MINISTRY OF ENVIRONMENT
TORONTO AREA WATERSHED MANAGEMENT STUDY-TAWMS 82
SITE No.9 SIMULATED RSF FALL 1982

FIG.M-21



APPENDIX N
FLUXES AND LOADINGS

APPENDIX N

FLUXES AND LOADINGS

Appendix N contains flux and loading data for the Humber River.
The contents of Appendix N are as follows.

<u>Table Number</u>	<u>Description</u>
N-1	Parameter Numbers Used in Appendix N
N-2	Dry Event Fluxes and Wet Event Loadings at TAWMS 82 Water Sampling Sites
N-3	Dry Event Fluxes and Wet Event Loadings from Humber River Subbasins
N-4	Dry Event Fluxes Per Unit Area and Wet Event Loadings Per Unit Area from Humber River Subbasins
N-5	Recent Annual Loadings of Selected Parameters to Lake Ontario from the Humber River

TABLE N-1

Parameter Numbers Used in Appendix N

<u>Parameter Number</u>	<u>Parameter Name</u>
1	Cadmium, unfiltered total
2	Chromium, unfiltered total
3	Copper, unfiltered total
4	Mercury, unfiltered total
5	Nickel, unfiltered total
6	Lead, unfiltered total
7	Zinc, unfiltered total
8	Fecal coliforms
9	Fecal streptococci
10	Aldrin
11	α -BHC hexachlorocyclohexane
12	β -BHC hexachlorocyclohexane
13	γ -BHC (Lindane)
14	α -Chlordane
15	γ -Chlordane
16	Dieldrin
17	DMDT Methoxychlor
18	Endosulfan I
19	Endosulfan II
20	Endrin
21	Endosulfan sulfate
22	Heptachlorepoxyde
23	Heptachlor
24	Mirex
25	Oxychlordane
26	OP-DDT
27	PCB, total
28	PP-DDD
29	PP-DDE
30	PP-DDT
31	2,4,5-Trichlorophenoxyacetic acid
32	2,4-Dichlorophenoxyacetic acid
33	2,4-Dichlorophenoxybutyric acid
34	2,4-D Propionic acid
35	Dicamba
36	Picloram
37	Silvex
38	Hexachlorobenzene
39	2,3,4-Trichlorophenol
40	2,3,4,5-Tetrachlorophenol
41	2,3,4,6-Tetrachlorophenol
42	2,4,5-Trichlorophenol
43	2,4,6-Trichlorophenol
44	Pentachlorophenol
45	BOD ₅
46	Total ammonium, filtered reactive
47	pH
48	Phosphates, filtered reactive
49	Phosphorus, unfiltered total

Table N-1
Parameter Numbers
Used in Appendix N - 2

<u>Parameter Number</u>	<u>Parameter Name</u>
50	Residue, filtrate
51	Residue, particulate
52	Discharge

Table N-2

Dry Event Fluxes and Wet Event Loadings
at TAWMS 82 Water Sampling Sites

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
 DRY EVENT 1 FLUXES - October 5, 1982

In counts/s for parameters 8 and 9 and ks/s for all other parameters.

PARA\SITE	3	5	6	7	8	9	10	11
1	6.12E-07	7.14E-08	6.85E-07	6.75E-07	2.51E-07	4.61E-07	4.39E-07	3.33E-07
2	1.37E-05	6.54E-06	1.22E-05	5.30E-06	2.03E-06	2.77E-06	2.19E-06	8.62E-07
3	2.31E-05	4.78E-06	1.64E-05	1.59E-05	6.77E-06	1.11E-05	1.16E-05	2.60E-06
4	1.20E-07	1.11E-08	1.05E-07	1.03E-07	2.88E-08	7.35E-08	5.76E-08	9.34E-09
5	7.97E-06	1.79E-06	1.22E-05	1.21E-05	7.70E-07	3.68E-06	1.45E-06	4.78E-07
6	9.18E-06	1.61E-06	1.54E-05	9.40E-06	3.28E-06	5.52E-06	5.09E-06	2.03E-06
7	1.86E-05	1.06E-05	6.91E-05	9.40E-06	1.26E-06	5.52E-06	2.24E-05	3.87E-06
8	9.69E+06	5.50E+06	4.10E+06	1.73E+06	7.86E+05	1.56E+06	7.96E+05	2.46E+06
9	2.73E+06	5.64E+05	4.59E+06	1.63E+06	3.36E+05	1.47E+06	5.06E+05	4.71E+05
10	3.06E-09	2.50E-10	2.69E-09	2.65E-09	7.70E-10	1.84E-09	1.45E-09	2.10E-10
11	4.70E-09	3.21E-10	4.16E-09	5.56E-09	2.23E-09	2.77E-09	8.15E-09	5.36E-10
12	3.06E-09	2.50E-10	2.69E-09	2.65E-09	7.70E-10	1.84E-09	1.45E-09	2.10E-10
13	3.06E-09	3.21E-10	2.69E-09	8.46E-09	2.72E-09	3.69E-09	1.45E-09	4.42E-10
14	6.12E-09	5.00E-10	5.38E-09	5.30E-09	1.54E-09	3.68E-09	2.90E-09	4.20E-10
15	6.12E-09	5.00E-10	5.38E-09	5.30E-09	1.54E-09	3.68E-09	2.90E-09	4.20E-10
16	6.12E-09	5.00E-10	5.38E-09	5.30E-09	1.54E-09	3.68E-09	2.90E-09	4.20E-10
17	1.53E-08	1.25E-09	1.35E-08	1.33E-08	3.85E-09	9.20E-09	7.25E-09	1.05E-09
18	6.12E-09	5.00E-10	5.38E-09	5.30E-09	1.54E-09	3.68E-09	2.90E-09	4.20E-10
19	5.69E-09	7.14E-10	4.88E-09	4.79E-09	1.13E-09	3.65E-09	5.80E-09	6.08E-10
20	1.22E-08	1.00E-09	1.08E-08	1.06E-08	3.08E-09	7.36E-09	5.80E-09	8.40E-10
21	5.69E-09	7.14E-10	4.88E-09	4.79E-09	1.13E-09	3.65E-09	5.80E-09	6.08E-10
22	3.06E-09	2.50E-10	2.69E-09	2.65E-09	7.70E-10	1.84E-09	1.45E-09	2.10E-10
23	3.06E-09	2.50E-10	2.69E-09	2.65E-09	7.70E-10	1.84E-09	1.45E-09	2.10E-10
24	1.53E-08	1.25E-09	1.35E-08	1.33E-08	3.85E-09	9.20E-09	7.25E-09	1.05E-09
25	6.12E-09	5.00E-10	5.38E-09	5.30E-09	1.54E-09	3.68E-09	2.90E-09	4.20E-10
26	1.53E-08	1.25E-09	1.35E-08	1.33E-08	3.85E-09	9.20E-09	7.25E-09	1.05E-09
27	6.12E-08	5.00E-09	5.38E-08	5.30E-08	1.54E-08	3.68E-08	2.90E-08	4.20E-09
28	1.53E-08	1.25E-09	1.35E-08	1.33E-08	3.85E-09	9.20E-09	7.25E-09	1.05E-09
29	3.06E-09	2.50E-10	2.69E-09	2.65E-09	7.70E-10	1.84E-09	1.45E-09	2.10E-10
30	1.53E-08	1.25E-09	1.35E-08	1.33E-08	3.85E-09	9.20E-09	7.25E-09	1.05E-09
31	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
32	3.06E-07	2.50E-08	2.69E-07	2.65E-07	7.70E-08	1.84E-07	1.45E-07	2.85E-08
33	6.12E-07	5.00E-08	5.38E-07	5.30E-07	1.54E-07	3.68E-07	2.90E-07	4.20E-08
34	3.06E-07	2.50E-08	2.69E-07	2.65E-07	7.70E-08	1.84E-07	1.45E-07	2.10E-08
35	3.06E-07	2.50E-08	2.69E-07	2.65E-07	7.70E-08	1.84E-07	1.45E-07	2.10E-08
36	3.06E-07	2.50E-08	2.69E-07	2.65E-07	7.70E-08	1.84E-07	1.45E-07	2.10E-08
37	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
38	3.06E-09	2.50E-10	2.69E-09	2.65E-09	7.70E-10	1.84E-09	1.45E-09	2.10E-10
39	3.06E-07	2.50E-08	2.69E-07	2.65E-07	7.70E-08	1.84E-07	1.45E-07	2.10E-08
40	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
41	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
42	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
43	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
44	1.53E-07	1.25E-08	1.34E-07	1.33E-07	3.85E-08	9.20E-08	7.25E-08	1.05E-08
45	2.98E-03	4.64E-04	2.70E-03	2.93E-03	4.62E-04	1.51E-03	1.25E-03	2.95E-04
46	1.34E-04	1.29E-06	9.84E-05	8.41E-05	1.87E-05	3.89E-05	1.62E-05	1.56E-05
48	1.26E-05	6.11E-05	1.42E-05	1.35E-05	2.59E-06	1.06E-05	8.25E-06	2.81E-05
49	6.08E-05	8.68E-05	5.62E-05	5.56E-05	1.39E-05	4.23E-05	2.82E-05	4.09E-05
50	1.31E+00	2.62E-01	1.00E+00	9.45E-01	3.66E-01	7.01E-01	5.22E-01	1.95E-01
51	1.66E-02	2.40E-03	3.51E-02	2.70E-02	1.71E-03	1.05E-02	2.36E-02	1.73E-03

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
 DRY EVENT 2 FLUXES - October 26, 1982

In counts/s for parameters 8 and 9 and ks/s for all other parameters.

PARA\SITE	3	5	7	8	9	10	11
1	7.04E-07	2.86E-08	8.21E-07	4.31E-07	4.68E-07	4.63E-07	1.27E-07
2	1.57E-05	2.61E-06	6.44E-06	3.47E-06	2.81E-06	2.31E-06	3.28E-07
3	2.65E-05	1.91E-06	1.93E-05	1.16E-05	1.12E-05	1.22E-05	9.90E-07
4	1.38E-07	4.43E-09	1.26E-07	4.93E-08	7.47E-08	6.08E-08	3.56E-09
5	9.17E-06	7.14E-07	1.46E-05	1.32E-06	3.74E-06	1.53E-06	1.82E-07
6	1.06E-05	6.43E-07	1.14E-05	5.63E-06	5.61E-06	5.37E-06	7.72E-07
7	2.14E-05	4.26E-06	1.14E-05	2.15E-06	5.61E-06	2.37E-05	1.47E-06
8	1.11E+07	2.20E+06	2.10E+06	1.35E+06	1.59E+06	8.40E+05	9.38E+05
9	3.14E+06	2.26E+05	1.98E+06	5.77E+05	1.49E+06	5.34E+05	1.79E+05
10	3.52E-09	1.00E-10	3.22E-09	1.32E-09	1.87E-09	1.53E-09	8.00E-11
11	5.40E-09	1.29E-10	6.75E-09	3.82E-09	2.81E-09	8.60E-09	2.04E-10
12	3.52E-09	1.00E-10	3.22E-09	1.32E-09	1.87E-09	1.53E-09	8.00E-11
13	3.52E-09	1.29E-10	1.03E-08	4.65E-09	3.75E-09	1.53E-09	1.68E-10
14	7.04E-09	2.00E-10	6.44E-09	2.64E-09	3.74E-09	3.06E-09	1.60E-10
15	7.04E-09	2.00E-10	6.44E-09	2.64E-09	3.74E-09	3.06E-09	1.60E-10
16	7.04E-09	2.00E-10	6.44E-09	2.64E-09	3.74E-09	3.06E-09	1.60E-10
17	1.76E-08	5.00E-10	1.61E-08	6.60E-09	9.35E-09	7.65E-09	4.00E-10
18	7.04E-09	2.00E-10	6.44E-09	2.64E-09	3.74E-09	3.06E-09	1.60E-10
19	6.55E-09	2.86E-10	5.82E-09	1.95E-09	3.71E-09	6.12E-09	2.32E-10
20	1.41E-08	4.00E-10	1.29E-08	5.28E-09	7.48E-09	6.12E-09	3.20E-10
21	6.55E-09	2.86E-10	5.82E-09	1.95E-09	3.71E-09	6.12E-09	2.32E-10
22	3.52E-09	1.00E-10	3.22E-09	1.32E-09	1.87E-09	1.53E-09	8.00E-11
23	3.52E-09	1.00E-10	3.22E-09	1.32E-09	1.87E-09	1.53E-09	8.00E-11
24	1.76E-08	5.00E-10	1.61E-08	6.60E-09	9.35E-09	7.65E-09	4.00E-10
25	7.04E-09	2.00E-10	6.44E-09	2.64E-09	3.74E-09	3.06E-09	1.60E-10
26	1.76E-08	5.00E-10	1.61E-08	6.60E-09	9.35E-09	7.65E-09	4.00E-10
27	7.04E-08	2.00E-09	6.44E-08	2.64E-08	3.74E-08	3.06E-08	1.60E-09
28	1.76E-08	5.00E-10	1.61E-08	6.60E-09	9.35E-09	7.65E-09	4.00E-10
29	3.52E-09	1.00E-10	3.22E-09	1.32E-09	1.87E-09	1.53E-09	8.00E-11
30	1.76E-08	5.00E-10	1.61E-08	6.60E-09	9.35E-09	7.65E-09	4.00E-10
31	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
32	3.52E-07	1.00E-08	3.22E-07	1.32E-07	1.87E-07	1.53E-07	1.09E-08
33	7.04E-07	2.00E-08	6.44E-07	2.64E-07	3.74E-07	3.06E-07	1.60E-08
34	3.52E-07	1.00E-08	3.22E-07	1.32E-07	1.87E-07	1.53E-07	8.00E-09
35	3.52E-07	1.00E-08	3.22E-07	1.32E-07	1.87E-07	1.53E-07	8.00E-09
36	3.52E-07	1.00E-08	3.22E-07	1.32E-07	1.87E-07	1.53E-07	8.00E-09
37	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
38	3.52E-09	1.00E-10	3.22E-09	1.32E-09	1.87E-09	1.53E-09	8.00E-11
39	3.52E-07	1.00E-08	3.22E-07	1.32E-07	1.87E-07	1.53E-07	8.00E-09
40	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
41	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
42	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
43	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
44	1.76E-07	5.00E-09	1.61E-07	6.60E-08	9.35E-08	7.65E-08	4.00E-09
45	3.43E-03	1.86E-04	3.56E-03	7.91E-04	1.53E-03	1.32E-03	1.12E-04
46	1.54E-04	5.14E-07	1.02E-04	3.21E-05	3.95E-05	1.71E-05	5.95E-06
48	1.45E-05	2.44E-05	1.64E-05	4.45E-06	1.07E-05	8.71E-06	1.07E-05
49	7.00E-05	3.47E-05	6.76E-05	2.38E-05	4.30E-05	2.98E-05	1.55E-05
50	1.51E+00	1.05E-01	1.15E+00	6.27E-01	7.12E-01	5.50E-01	7.41E-02
51	1.90E-02	9.60E-04	3.28E-02	2.92E-03	1.07E-02	2.50E-02	6.59E-04

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 1 TOTAL LOADINGS - October 20, 1982

In m3 for Parameter 52
total counts for Parameters 8 and 9
ks for all other Parameters

PARASITE	3	5	6	7	8	9	10	11
52 WET	7.30E+04	6.50E+04	4.31E+04	2.94E+04	8.24E+03	6.50E+03	9.18E+02	3.40E+04
BAS	4.02E+05	2.05E+04	3.00E+05	2.95E+05	7.63E+04	1.03E+05	8.40E+04	1.43E+04
TOT	4.75E+05	8.55E+04	3.43E+05	3.25E+05	8.45E+04	1.10E+05	8.49E+04	4.83E+04
1 WET	2.59E-01	1.10E-01	2.55E-03	6.92E-04	0.00E+00	8.97E-04	0.00E+00	2.45E-02
BAS	8.05E-02	5.85E-03	7.63E-02	7.52E-02	2.49E-02	2.59E-02	2.54E-02	2.27E-02
TOT	3.39E-01	1.16E-01	7.88E-02	7.59E-02	2.49E-02	2.68E-02	2.54E-02	4.72E-02
2 WET	0.00E+00	1.93E+00	0.00E+00	1.64E-01	7.42E-02	3.28E-01	3.03E-02	3.98E-01
BAS	1.80E+00	5.35E-01	1.36E+00	5.90E-01	2.01E-01	1.56E-01	1.27E-01	5.88E-02
TOT	1.80E+00	2.47E+00	1.36E+00	7.54E-01	2.75E-01	4.83E-01	1.57E-01	4.57E-01
3 WET	2.83E+00	3.78E+00	1.07E+00	1.02E+00	1.68E-01	1.44E-01	3.67E-03	1.35E+00
BAS	3.03E+00	3.92E-01	1.83E+00	1.77E+00	6.70E-01	6.22E-01	6.72E-01	1.77E-01
TOT	5.87E+00	4.17E+00	2.90E+00	2.79E+00	8.38E-01	7.65E-01	6.76E-01	1.53E+00
4 WET	0.00E+00	1.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E-03
BAS	1.58E-02	9.06E-04	1.17E-02	1.15E-02	2.85E-03	4.13E-03	3.34E-03	6.37E-04
TOT	1.58E-02	1.49E-02	1.17E-02	1.15E-02	2.85E-03	4.13E-03	3.34E-03	7.81E-03
5 WET	0.00E+00	1.08E+00	0.00E+00	0.00E+00	7.82E-02	5.18E-02	9.18E-04	4.22E-01
BAS	1.05E+00	1.46E-01	1.36E+00	1.34E+00	7.63E-02	2.07E-01	8.40E-02	3.26E-02
TOT	1.05E+00	1.22E+00	1.36E+00	1.34E+00	1.54E-01	2.59E-01	8.49E-02	4.55E-01
6 WET	5.24E+00	1.20E+01	1.26E+00	1.59E+00	9.30E-01	4.64E-01	1.12E-02	5.22E+00
BAS	1.21E+00	1.32E-01	1.72E+00	1.05E+00	3.25E-01	3.10E-01	2.95E-01	1.38E-01
TOT	6.45E+00	1.22E+01	2.97E+00	2.64E+00	1.26E+00	7.74E-01	3.06E-01	5.36E+00
7 WET	7.52E+00	1.77E+01	6.89E-01	3.58E+00	1.09E+00	5.90E-01	1.22E+00	8.78E+00
BAS	2.44E+00	8.71E-01	7.69E+00	1.05E+00	1.24E-01	3.10E-01	1.30E+00	2.64E-01
TOT	9.96E+00	1.86E+01	8.38E+00	4.63E+00	1.22E+00	9.00E-01	2.52E+00	9.04E+00
8 WET	3.47E+12	2.53E+14	8.41E+12	6.12E+12	2.16E+12	1.05E+12	8.43E+11	1.36E+12
BAS	1.27E+12	4.50E+11	4.57E+11	1.92E+11	7.79E+10	8.77E+10	4.61E+10	1.68E+11
TOT	4.74E+12	2.54E+14	8.86E+12	6.31E+12	2.24E+12	1.14E+12	8.89E+11	1.53E+12
9 WET	8.34E+12	1.86E+14	5.48E+12	6.25E+12	4.43E+12	3.34E+12	2.20E+12	5.23E+12
BAS	3.59E+11	4.62E+10	5.11E+11	1.82E+11	3.33E+10	8.24E+10	2.93E+10	3.21E+10
TOT	8.69E+12	1.86E+14	5.99E+12	6.44E+12	4.46E+12	3.42E+12	2.23E+12	5.26E+12
10 WET	7.30E-05	6.50E-05	4.31E-05	2.94E-05	8.24E-06	6.50E-06	9.18E-07	3.40E-05
BAS	4.02E-04	2.05E-05	3.00E-04	2.95E-04	7.63E-05	1.03E-04	8.40E-05	1.43E-05
TOT	4.75E-04	8.55E-05	3.43E-04	3.25E-04	8.45E-05	1.10E-04	8.49E-05	4.83E-05
11 WET	9.13E-04	6.35E-04	-9.08E-04	2.12E-04	9.97E-05	4.24E-05	0.00E+00	4.97E-04
BAS	6.18E-04	2.63E-05	4.63E-04	6.19E-04	2.21E-04	1.56E-04	4.72E-04	3.66E-05
TOT	1.53E-03	6.61E-04	-4.45E-04	8.31E-04	3.20E-04	1.98E-04	4.72E-04	5.34E-04

12	WET	7.30E-05	6.38E-04	4.31E-05	2.94E-05	8.24E-06	6.50E-06	9.18E-07	3.13E-04
	BAS	4.02E-04	2.05E-05	3.00E-04	2.95E-04	7.63E-05	1.03E-04	8.40E-05	1.43E-05
	TOT	4.75E-04	6.58E-04	3.43E-04	3.25E-04	8.45E-05	1.10E-04	8.49E-05	3.27E-04
13	WET	7.30E-05	3.90E-04	4.31E-05	0.00E+00	0.00E+00	5.64E-05	9.18E-07	2.65E-04
	BAS	4.02E-04	2.63E-05	3.00E-04	9.43E-04	2.69E-04	2.08E-04	8.40E-05	3.01E-05
	TOT	4.75E-04	4.07E-04	3.43E-04	9.43E-04	2.69E-04	2.64E-04	8.49E-05	2.95E-04
14	WET	1.46E-04	1.29E-03	8.62E-05	5.88E-05	1.65E-05	1.30E-05	1.84E-06	6.80E-05
	BAS	8.05E-04	4.09E-05	5.99E-04	5.90E-04	1.53E-04	2.07E-04	1.68E-04	2.87E-05
	TOT	9.51E-04	1.32E-03	6.85E-04	6.49E-04	1.69E-04	2.20E-04	1.70E-04	9.66E-05
15	WET	1.46E-04	8.94E-04	8.62E-05	5.88E-05	1.65E-05	1.30E-05	1.84E-06	6.80E-05
	BAS	8.05E-04	4.09E-05	5.99E-04	5.90E-04	1.53E-04	2.07E-04	1.68E-04	2.87E-05
	TOT	9.51E-04	9.34E-04	6.85E-04	6.49E-04	1.69E-04	2.20E-04	1.70E-04	9.66E-05
16	WET	1.46E-04	1.30E-04	8.62E-05	5.88E-05	1.65E-05	1.30E-05	1.84E-06	6.80E-05
	BAS	8.05E-04	4.09E-05	5.99E-04	5.90E-04	1.53E-04	2.07E-04	1.68E-04	2.87E-05
	TOT	9.51E-04	1.71E-04	6.85E-04	6.49E-04	1.69E-04	2.20E-04	1.70E-04	9.66E-05
17	WET	3.65E-04	3.25E-04	2.16E-04	1.47E-04	4.12E-05	3.25E-05	4.59E-06	1.36E-04
	BAS	2.01E-03	1.02E-04	1.50E-03	1.48E-03	3.81E-04	5.17E-04	4.20E-04	7.16E-05
	TOT	2.38E-03	4.27E-04	1.71E-03	1.62E-03	4.22E-04	5.50E-04	4.25E-04	2.08E-04
18	WET	1.46E-04	1.30E-04	8.62E-05	5.88E-05	1.65E-05	1.30E-05	1.84E-06	6.80E-05
	BAS	8.05E-04	4.09E-05	5.99E-04	5.90E-04	1.53E-04	2.07E-04	1.68E-04	2.87E-05
	TOT	9.51E-04	1.71E-04	6.85E-04	6.49E-04	1.69E-04	2.20E-04	1.70E-04	9.66E-05
19	WET	8.31E-04	2.71E-04	3.98E-03	4.82E-04	1.24E-04	1.17E-04	3.67E-06	1.47E-04
	BAS	7.49E-04	5.85E-05	5.44E-04	5.33E-04	1.12E-04	2.05E-04	3.36E-04	4.15E-05
	TOT	1.58E-03	3.29E-04	4.52E-03	1.01E-03	2.36E-04	3.22E-04	3.40E-04	1.89E-04
20	WET	2.92E-04	2.60E-04	1.72E-04	1.18E-04	3.30E-05	2.60E-05	3.67E-06	1.36E-04
	BAS	1.61E-03	8.18E-05	1.20E-03	1.18E-03	3.05E-04	4.14E-04	3.36E-04	5.73E-05
	TOT	1.90E-03	3.42E-04	1.37E-03	1.30E-03	3.38E-04	4.40E-04	3.40E-04	1.93E-04
21	WET	8.31E-04	2.71E-04	3.98E-03	4.82E-04	1.24E-04	1.17E-04	3.67E-06	1.47E-04
	BAS	7.49E-04	5.85E-05	5.44E-04	5.33E-04	1.12E-04	2.05E-04	3.36E-04	4.15E-05
	TOT	1.58E-03	3.29E-04	4.52E-03	1.01E-03	2.36E-04	3.22E-04	3.40E-04	1.89E-04
22	WET	7.30E-05	6.50E-05	4.31E-05	2.94E-05	8.24E-06	6.50E-06	9.18E-07	3.40E-05
	BAS	4.02E-04	2.05E-05	3.00E-04	2.95E-04	7.63E-05	1.03E-04	8.40E-05	1.43E-05
	TOT	4.75E-04	8.55E-05	3.43E-04	3.25E-04	8.45E-05	1.10E-04	8.49E-05	4.83E-05
23	WET	7.30E-05	6.50E-05	4.31E-05	2.94E-05	8.24E-06	6.50E-06	9.18E-07	3.40E-05
	BAS	4.02E-04	2.05E-05	3.00E-04	2.95E-04	7.63E-05	1.03E-04	8.40E-05	1.43E-05
	TOT	4.75E-04	8.55E-05	3.43E-04	3.25E-04	8.45E-05	1.10E-04	8.49E-05	4.83E-05
24	WET	3.65E-04	3.25E-04	2.16E-04	1.47E-04	4.12E-05	3.25E-05	4.59E-06	1.70E-04
	BAS	2.01E-03	1.02E-04	1.50E-03	1.48E-03	3.81E-04	5.17E-04	4.20E-04	7.16E-05
	TOT	2.38E-03	4.27E-04	1.71E-03	1.62E-03	4.22E-04	5.50E-04	4.25E-04	2.42E-04
25	WET	1.46E-04	1.30E-04	8.62E-05	5.88E-05	1.65E-05	1.30E-05	1.84E-06	6.80E-05
	BAS	8.05E-04	4.09E-05	5.99E-04	5.90E-04	1.53E-04	2.07E-04	1.68E-04	2.87E-05
	TOT	9.51E-04	1.71E-04	6.85E-04	6.49E-04	1.69E-04	2.20E-04	1.70E-04	9.66E-05

26	WET	3.65E-04	3.25E-04	2.16E-04	1.47E-04	4.12E-05	3.25E-05	4.59E-06	1.70E-04
	BAS	2.01E-03	1.02E-04	1.50E-03	1.48E-03	3.81E-04	5.17E-04	4.20E-04	7.16E-05
	TOT	2.38E-03	4.27E-04	1.71E-03	1.62E-03	4.22E-04	5.50E-04	4.25E-04	2.42E-04
27	WET	1.46E-03	0.00E+00	8.62E-04	5.88E-04	1.65E-04	1.30E-04	1.84E-05	6.80E-04
	BAS	8.05E-03	4.09E-04	5.99E-03	5.90E-03	1.53E-03	2.07E-03	1.68E-03	2.87E-04
	TOT	9.51E-03	4.09E-04	6.85E-03	6.49E-03	1.69E-03	2.20E-03	1.70E-03	9.66E-04
28	WET	3.65E-04	3.25E-04	2.16E-04	1.47E-04	4.12E-05	3.25E-05	4.59E-06	1.70E-04
	BAS	2.01E-03	1.02E-04	1.50E-03	1.48E-03	3.81E-04	5.17E-04	4.20E-04	7.16E-05
	TOT	2.38E-03	4.27E-04	1.71E-03	1.62E-03	4.22E-04	5.50E-04	4.25E-04	2.42E-04
29	WET	7.30E-05	6.50E-05	4.31E-05	2.94E-05	8.24E-06	6.50E-06	9.18E-07	3.40E-05
	BAS	4.02E-04	2.05E-05	3.00E-04	2.95E-04	7.63E-05	1.03E-04	8.40E-05	1.43E-05
	TOT	4.75E-04	8.55E-05	3.43E-04	3.25E-04	8.45E-05	1.10E-04	8.49E-05	4.83E-05
30	WET	3.65E-04	3.25E-04	2.16E-04	1.47E-04	4.12E-05	3.25E-05	4.59E-06	1.70E-04
	BAS	2.01E-03	1.02E-04	1.50E-03	1.48E-03	3.81E-04	5.17E-04	4.20E-04	7.16E-05
	TOT	2.38E-03	4.27E-04	1.71E-03	1.62E-03	4.22E-04	5.50E-04	4.25E-04	2.42E-04
31	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	4.12E-04	3.25E-04	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.22E-03	5.50E-03	4.25E-03	2.42E-03
32	WET	7.30E-03	6.50E-03	3.73E-02	1.62E-02	7.13E-03	6.50E-04	9.18E-05	1.02E-02
	BAS	4.02E-02	2.05E-03	3.00E-02	2.95E-02	7.63E-03	1.03E-02	8.40E-03	1.95E-03
	TOT	4.75E-02	8.55E-03	6.72E-02	4.57E-02	1.48E-02	1.10E-02	8.49E-03	1.21E-02
33	WET	1.46E-02	1.30E-02	8.62E-03	5.88E-03	1.65E-03	1.30E-03	1.84E-04	6.80E-03
	BAS	8.05E-02	4.09E-03	5.99E-02	5.90E-02	1.53E-02	2.07E-02	1.68E-02	2.87E-03
	TOT	9.51E-02	1.71E-02	6.85E-02	6.49E-02	1.69E-02	2.20E-02	1.70E-02	9.66E-03
34	WET	7.30E-03	6.50E-03	4.31E-03	2.94E-03	4.08E-03	6.50E-04	9.18E-05	3.40E-03
	BAS	4.02E-02	2.05E-03	3.00E-02	2.95E-02	7.63E-03	1.03E-02	8.40E-03	1.43E-03
	TOT	4.75E-02	8.55E-03	3.43E-02	3.25E-02	1.17E-02	1.10E-02	8.49E-03	4.83E-03
35	WET	7.30E-03	6.50E-03	4.31E-03	2.94E-03	8.24E-04	6.50E-04	9.18E-05	3.40E-03
	BAS	4.02E-02	2.05E-03	3.00E-02	2.95E-02	7.63E-03	1.03E-02	8.40E-03	1.43E-03
	TOT	4.75E-02	8.55E-03	3.43E-02	3.25E-02	8.45E-03	1.10E-02	8.49E-03	4.83E-03
36	WET	7.30E-03	6.50E-03	4.31E-03	2.94E-03	8.24E-04	6.50E-04	9.18E-05	3.40E-03
	BAS	4.02E-02	2.05E-03	3.00E-02	2.95E-02	7.63E-03	1.03E-02	8.40E-03	1.43E-03
	TOT	4.75E-02	8.55E-03	3.43E-02	3.25E-02	8.45E-03	1.10E-02	8.49E-03	4.83E-03
37	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	4.12E-04	2.11E-03	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.22E-03	7.28E-03	4.25E-03	2.42E-03
38	WET	7.30E-05	6.50E-05	4.31E-05	2.94E-05	7.61E-05	6.50E-06	9.18E-07	1.70E-04
	BAS	4.02E-04	2.05E-05	3.00E-04	2.95E-04	7.63E-05	1.03E-04	8.40E-05	1.43E-05
	TOT	4.75E-04	8.55E-05	3.43E-04	3.25E-04	1.52E-04	1.10E-04	8.49E-05	1.84E-04
39	WET	7.30E-03	6.50E-03	4.31E-03	2.94E-03	8.24E-04	6.50E-04	9.18E-05	3.40E-03
	BAS	4.02E-02	2.05E-03	3.00E-02	2.95E-02	7.63E-03	1.03E-02	8.40E-03	1.43E-03
	TOT	4.75E-02	8.55E-03	3.43E-02	3.25E-02	8.45E-03	1.10E-02	8.49E-03	4.83E-03

40	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	4.12E-04	3.25E-04	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.22E-03	5.50E-03	4.25E-03	2.42E-03
41	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	4.12E-04	3.25E-04	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.22E-03	5.50E-03	4.25E-03	2.42E-03
42	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	4.12E-04	3.25E-04	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.22E-03	5.50E-03	4.25E-03	2.42E-03
43	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	4.12E-04	3.25E-04	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.22E-03	5.50E-03	4.25E-03	2.42E-03
44	WET	3.65E-03	3.25E-03	2.16E-03	1.47E-03	1.02E-03	3.25E-04	4.59E-05	1.70E-03
	BAS	2.01E-02	1.02E-03	1.50E-02	1.48E-02	3.81E-03	5.17E-03	4.20E-03	7.16E-04
	TOT	2.38E-02	4.27E-03	1.71E-02	1.62E-02	4.84E-03	5.50E-03	4.25E-03	2.42E-03
45	WET	1.08E+02	1.28E+03	1.34E+02	7.08E+01	1.75E+02	5.03E+01	0.00E+00	3.51E+02
	BAS	3.92E+02	3.80E+01	3.00E+02	3.26E+02	4.57E+01	8.48E+01	7.25E+01	2.01E+01
	TOT	5.00E+02	1.32E+03	4.34E+02	3.97E+02	2.20E+02	1.35E+02	7.25E+01	3.71E+02
46	WET	3.16E+00	6.02E+01	0.00E+00	0.00E+00	1.76E-01	2.65E+00	1.68E+00	6.19E+00
	BAS	1.76E+01	1.05E-01	1.10E+01	9.37E+00	1.85E+00	2.18E+00	9.40E-01	1.07E+00
	TOT	2.08E+01	6.03E+01	1.10E+01	9.37E+00	2.03E+00	4.83E+00	2.62E+00	7.25E+00
48	WET	0.00E+00	1.55E+01	1.19E+00	1.55E+00	3.28E-01	2.46E+00	0.00E+00	2.63E+00
	BAS	1.66E+00	5.00E+00	1.58E+00	1.50E+00	2.57E-01	5.94E-01	4.78E-01	1.91E+00
	TOT	1.66E+00	2.05E+01	2.77E+00	3.05E+00	5.85E-01	3.06E+00	4.78E-01	4.55E+00
49	WET	1.04E+00	8.46E+01	7.06E+00	3.22E+00	1.69E+00	1.43E+01	2.10E-01	1.78E+01
	BAS	8.00E+00	7.10E+00	6.26E+00	6.20E+00	1.37E+00	2.38E+00	1.63E+00	2.78E+00
	TOT	9.04E+00	9.17E+01	1.33E+01	9.42E+00	3.07E+00	1.67E+01	1.84E+00	2.06E+01
50	WET	1.26E+04	3.18E+04	1.73E+04	1.06E+04	5.56E+02	2.53E+02	5.37E+01	1.01E+04
	BAS	1.73E+05	2.14E+04	1.12E+05	1.05E+05	3.62E+04	3.94E+04	3.02E+04	1.33E+04
	TOT	1.85E+05	5.32E+04	1.29E+05	1.16E+05	3.68E+04	3.97E+04	3.03E+04	2.34E+04
51	WET	1.55E+03	1.65E+04	1.13E+03	1.23E+03	4.61E+02	2.27E+03	0.00E+00	7.33E+03
	BAS	2.18E+03	1.96E+02	3.91E+03	3.01E+03	1.69E+02	5.90E+02	1.37E+03	1.18E+02
	TOT	3.73E+03	1.67E+04	5.04E+03	4.24E+03	6.30E+02	2.86E+03	1.37E+03	7.45E+03

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 2 TOTAL LOADINGS - November 3-5, 1982

In m3 for parameter 52
total counts for parameters 8 and 9
kg for all other parameters

PARA\SITE	3	5	6	7	8	9	10	11
52 WET	1.20E+07	1.51E+06	1.02E+07	9.68E+06	3.29E+06	5.25E+06	4.58E+06	1.02E+06
BAS	3.50E+06	4.51E+05	3.06E+06	2.99E+06	9.48E+05	2.20E+06	1.78E+06	3.74E+05
TOT	1.55E+07	1.97E+06	1.32E+07	1.27E+07	4.24E+06	7.45E+06	6.36E+06	1.39E+06
1 WET	6.35E+00	7.95E-01	3.00E+00	4.44E+00	9.35E-01	1.37E+00	1.42E+00	1.98E-01
BAS	7.01E-01	1.29E-01	7.80E-01	7.63E-01	3.09E-01	5.51E-01	5.39E-01	5.93E-01
TOT	7.05E+00	9.24E-01	3.78E+00	5.20E+00	1.24E+00	1.92E+00	1.96E+00	7.91E-01
2 WET	1.27E+02	1.11E+01	9.39E+01	1.25E+02	2.65E+01	5.42E+01	4.47E+01	1.01E+01
BAS	1.56E+01	1.18E+01	1.39E+01	5.99E+00	2.49E+00	3.31E+00	2.70E+00	1.53E+00
TOT	1.42E+02	2.29E+01	1.08E+02	1.31E+02	2.90E+01	5.75E+01	4.74E+01	1.16E+01
3 WET	4.51E+02	2.33E+01	1.52E+02	1.96E+02	4.67E+01	8.03E+01	7.75E+01	1.75E+01
BAS	2.64E+01	8.63E+00	1.87E+01	1.80E+01	8.33E+00	1.32E+01	1.43E+01	4.63E+00
TOT	4.77E+02	3.19E+01	1.71E+02	2.14E+02	5.51E+01	9.35E+01	9.17E+01	2.22E+01
4 WET	4.79E-01	6.88E-02	4.08E-01	3.88E-01	1.33E-01	2.01E-01	1.29E-01	6.38E-02
BAS	1.38E-01	2.00E-02	1.20E-01	1.17E-01	3.54E-02	8.78E-02	7.08E-02	1.66E-02
TOT	6.17E-01	8.88E-02	5.28E-01	5.05E-01	1.68E-01	2.89E-01	2.00E-01	8.04E-02
5 WET	9.87E+01	9.83E+00	6.18E+01	8.81E+01	2.15E+01	3.40E+01	3.30E+01	7.23E+00
BAS	9.13E+00	3.22E+00	1.39E+01	1.36E+01	9.48E-01	4.40E+00	1.78E+00	8.51E-01
TOT	1.08E+02	1.31E+01	7.58E+01	1.02E+02	2.25E+01	3.84E+01	3.48E+01	8.08E+00
6 WET	3.01E+02	8.12E+01	1.51E+02	1.60E+02	4.82E+01	5.90E+01	5.97E+01	5.55E+01
BAS	1.05E+01	2.90E+00	1.76E+01	1.06E+01	4.04E+00	6.60E+00	6.26E+00	3.61E+00
TOT	3.12E+02	8.41E+01	1.69E+02	1.70E+02	5.23E+01	6.56E+01	6.59E+01	5.91E+01
7 WET	5.83E+02	9.60E+01	3.62E+02	4.99E+02	1.29E+02	1.88E+02	1.39E+02	8.14E+01
BAS	2.13E+01	1.92E+01	7.86E+01	1.06E+01	1.55E+00	6.60E+00	2.75E+01	6.88E+00
TOT	6.04E+02	1.15E+02	4.41E+02	5.09E+02	1.31E+02	1.94E+02	1.67E+02	8.83E+01
8 WET	2.02E+14	2.06E+13	5.12E+13	5.34E+13	1.96E+13	1.61E+13	1.90E+13	4.01E+12
BAS	1.11E+13	9.92E+12	4.67E+12	1.95E+12	9.67E+11	1.87E+12	9.78E+11	4.39E+12
TOT	2.13E+14	3.06E+13	5.59E+13	5.53E+13	2.05E+13	1.80E+13	2.00E+13	9.39E+12
9 WET	4.18E+14	5.68E+13	2.52E+14	2.10E+14	2.25E+13	6.87E+13	3.99E+13	1.61E+13
BAS	3.13E+12	1.02E+12	5.22E+12	1.84E+12	4.14E+11	1.75E+12	6.21E+11	8.38E+11
TOT	4.21E+14	5.78E+13	2.57E+14	2.12E+14	2.29E+13	7.05E+13	4.05E+13	1.69E+13
10 WET	1.20E-02	1.51E-03	1.02E-02	9.68E-03	3.29E-03	5.25E-03	4.58E-03	1.02E-03
BAS	3.50E-03	4.51E-04	3.06E-03	2.99E-03	9.48E-04	2.20E-03	1.78E-03	3.74E-04
TOT	1.55E-02	1.97E-03	1.32E-02	1.27E-02	4.24E-03	7.45E-03	6.36E-03	1.39E-03
11 WET	8.01E-02	2.07E-02	9.87E-02	8.45E-02	2.32E-02	4.30E-02	7.61E-03	9.75E-03
BAS	5.38E-03	5.80E-04	4.73E-03	6.28E-03	2.74E-03	3.31E-03	1.00E-02	9.54E-04
TOT	8.55E-02	2.13E-02	1.03E-01	9.08E-02	2.60E-02	4.63E-02	1.76E-02	1.07E-02

12	WET	3.00E-02	7.52E-03	4.84E-02	3.10E-02	3.29E-03	1.24E-02	4.58E-03	1.02E-03
	BAS	3.50E-03	4.51E-04	3.06E-03	2.99E-03	9.48E-04	2.20E-03	1.78E-03	3.74E-04
	TOT	3.35E-02	7.97E-03	5.15E-02	3.40E-02	4.24E-03	1.46E-02	6.36E-03	1.39E-03
13	WET	3.94E-02	8.20E-03	3.61E-02	5.76E-02	9.40E-03	2.56E-02	1.60E-02	1.27E-02
	BAS	3.50E-03	5.80E-04	3.06E-03	9.56E-03	3.34E-03	4.42E-03	1.78E-03	7.86E-04
	TOT	4.29E-02	8.78E-03	3.91E-02	6.71E-02	1.27E-02	3.00E-02	1.77E-02	1.35E-02
14	WET	2.39E-02	3.03E-03	2.03E-02	1.94E-02	6.58E-03	1.05E-02	9.15E-03	2.04E-03
	BAS	7.01E-03	9.02E-04	6.12E-03	5.99E-03	1.90E-03	4.40E-03	3.56E-03	7.48E-04
	TOT	3.09E-02	3.93E-03	2.64E-02	2.53E-02	8.47E-03	1.49E-02	1.27E-02	2.79E-03
15	WET	2.39E-02	3.03E-03	2.03E-02	1.94E-02	6.58E-03	1.05E-02	9.15E-03	3.08E-03
	BAS	7.01E-03	9.02E-04	6.12E-03	5.99E-03	1.90E-03	4.40E-03	3.56E-03	7.48E-04
	TOT	3.09E-02	3.93E-03	2.64E-02	2.53E-02	8.47E-03	1.49E-02	1.27E-02	3.83E-03
16	WET	2.39E-02	3.03E-03	2.03E-02	1.94E-02	6.58E-03	1.05E-02	9.15E-03	2.04E-03
	BAS	7.01E-03	9.02E-04	6.12E-03	5.99E-03	1.90E-03	4.40E-03	3.56E-03	7.48E-04
	TOT	3.09E-02	3.93E-03	2.64E-02	2.53E-02	8.47E-03	1.49E-02	1.27E-02	2.79E-03
17	WET	5.98E-02	7.57E-03	5.08E-02	4.84E-02	1.64E-02	2.63E-02	2.29E-02	5.10E-03
	BAS	1.75E-02	2.26E-03	1.53E-02	1.50E-02	4.74E-03	1.10E-02	8.91E-03	1.87E-03
	TOT	7.73E-02	9.83E-03	6.61E-02	6.33E-02	2.12E-02	3.73E-02	3.18E-02	6.97E-03
18	WET	2.39E-02	3.03E-03	2.03E-02	1.94E-02	6.58E-03	1.05E-02	9.15E-03	2.04E-03
	BAS	7.01E-03	9.02E-04	6.12E-03	5.99E-03	1.90E-03	4.40E-03	3.56E-03	7.48E-04
	TOT	3.09E-02	3.93E-03	2.64E-02	2.53E-02	8.47E-03	1.49E-02	1.27E-02	2.79E-03
19	WET	5.19E-02	6.25E-03	4.65E-02	4.13E-02	1.42E-02	2.30E-02	1.83E-02	4.25E-03
	BAS	6.52E-03	1.29E-03	5.56E-03	5.41E-03	1.40E-03	4.36E-03	7.13E-03	1.08E-03
	TOT	5.84E-02	7.54E-03	5.20E-02	4.67E-02	1.56E-02	2.73E-02	2.54E-02	5.33E-03
20	WET	4.78E-02	6.06E-03	4.06E-02	3.87E-02	1.32E-02	2.10E-02	1.83E-02	4.08E-03
	BAS	1.40E-02	1.80E-03	1.22E-02	1.20E-02	3.79E-03	8.80E-03	7.13E-03	1.50E-03
	TOT	6.18E-02	7.86E-03	5.29E-02	5.07E-02	1.69E-02	2.98E-02	2.54E-02	5.58E-03
21	WET	5.19E-02	6.25E-03	4.65E-02	4.13E-02	1.42E-02	2.30E-02	1.83E-02	4.25E-03
	BAS	6.52E-03	1.29E-03	5.56E-03	5.41E-03	1.40E-03	4.36E-03	7.13E-03	1.08E-03
	TOT	5.84E-02	7.54E-03	5.20E-02	4.67E-02	1.56E-02	2.73E-02	2.54E-02	5.33E-03
22	WET	1.20E-02	1.51E-03	1.02E-02	9.68E-03	3.29E-03	5.25E-03	4.58E-03	1.02E-03
	BAS	3.50E-03	4.51E-04	3.06E-03	2.99E-03	9.48E-04	2.20E-03	1.78E-03	3.74E-04
	TOT	1.55E-02	1.97E-03	1.32E-02	1.27E-02	4.24E-03	7.45E-03	6.36E-03	1.39E-03
23	WET	1.20E-02	1.51E-03	1.02E-02	9.68E-03	3.29E-03	5.25E-03	4.58E-03	1.02E-03
	BAS	3.50E-03	4.51E-04	3.06E-03	2.99E-03	9.48E-04	2.20E-03	1.78E-03	3.74E-04
	TOT	1.55E-02	1.97E-03	1.32E-02	1.27E-02	4.24E-03	7.45E-03	6.36E-03	1.39E-03
24	WET	5.98E-02	7.57E-03	5.08E-02	4.84E-02	1.64E-02	2.63E-02	2.29E-02	5.10E-03
	BAS	1.75E-02	2.26E-03	1.53E-02	1.50E-02	4.74E-03	1.10E-02	8.91E-03	1.87E-03
	TOT	7.73E-02	9.83E-03	6.61E-02	6.33E-02	2.12E-02	3.73E-02	3.18E-02	6.97E-03
25	WET	2.39E-02	3.03E-03	2.03E-02	1.94E-02	6.58E-03	1.05E-02	9.15E-03	2.04E-03
	BAS	7.01E-03	9.02E-04	6.12E-03	5.99E-03	1.90E-03	4.40E-03	3.56E-03	7.48E-04
	TOT	3.09E-02	3.93E-03	2.64E-02	2.53E-02	8.47E-03	1.49E-02	1.27E-02	2.79E-03

26	WET	5.98E-02	7.57E-03	5.08E-02	4.84E-02	1.64E-02	2.63E-02	2.29E-02	5.10E-03
	BAS	1.75E-02	2.26E-03	1.53E-02	1.50E-02	4.74E-03	1.10E-02	8.91E-03	1.87E-03
	TOT	7.73E-02	9.83E-03	6.61E-02	6.33E-02	2.12E-02	3.73E-02	3.18E-02	6.97E-03
27	WET	2.39E-01	0.00E+00	0.00E+00	0.00E+00	6.58E-02	1.05E-01	9.15E-02	2.04E-02
	BAS	7.01E-02	9.02E-03	6.12E-02	5.99E-02	1.90E-02	4.40E-02	3.56E-02	7.48E-03
	TOT	3.09E-01	9.02E-03	6.12E-02	5.99E-02	8.47E-02	1.49E-01	1.27E-01	2.79E-02
28	WET	5.98E-02	7.57E-03	5.08E-02	4.84E-02	1.64E-02	2.63E-02	2.29E-02	5.10E-03
	BAS	1.75E-02	2.26E-03	1.53E-02	1.50E-02	4.74E-03	1.10E-02	8.91E-03	1.87E-03
	TOT	7.73E-02	9.83E-03	6.61E-02	6.33E-02	2.12E-02	3.73E-02	3.18E-02	6.97E-03
29	WET	1.20E-02	1.51E-03	1.02E-02	9.68E-03	3.29E-03	5.25E-03	4.58E-03	1.02E-03
	BAS	3.50E-03	4.51E-04	3.06E-03	2.99E-03	9.48E-04	2.20E-03	1.78E-03	3.74E-04
	TOT	1.55E-02	1.97E-03	1.32E-02	1.27E-02	4.24E-03	7.45E-03	6.36E-03	1.39E-03
30	WET	5.98E-02	7.57E-03	5.08E-02	4.84E-02	1.64E-02	2.63E-02	2.29E-02	5.10E-03
	BAS	1.75E-02	2.26E-03	1.53E-02	1.50E-02	4.74E-03	1.10E-02	8.91E-03	1.87E-03
	TOT	7.73E-02	9.83E-03	6.61E-02	6.33E-02	2.12E-02	3.73E-02	3.18E-02	6.97E-03
31	WET	5.98E-01	7.57E-02	5.08E-01	4.84E-01	1.64E-01	2.63E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	7.73E-01	9.83E-02	6.61E-01	6.33E-01	2.12E-01	3.73E-01	3.18E-01	6.97E-02
32	WET	2.33E+00	1.51E-01	2.45E+00	2.98E+00	1.68E+00	8.09E-01	4.58E-01	3.85E-01
	BAS	3.50E-01	4.51E-02	3.06E-01	2.99E-01	9.48E-02	2.20E-01	1.78E-01	5.08E-02
	TOT	2.68E+00	1.97E-01	2.76E+00	3.28E+00	1.78E+00	1.03E+00	6.36E-01	4.36E-01
33	WET	2.39E+00	3.03E-01	2.03E+00	1.94E+00	6.58E-01	1.05E+00	9.15E-01	2.04E-01
	BAS	7.01E-01	9.02E-02	6.12E-01	5.99E-01	1.90E-01	4.40E-01	3.56E-01	7.48E-02
	TOT	3.09E+00	3.93E-01	2.64E+00	2.53E+00	8.47E-01	1.49E+00	1.27E+00	2.79E-01
34	WET	1.20E+00	1.51E-01	1.02E+00	9.68E-01	3.29E-01	5.25E-01	4.58E-01	2.39E-01
	BAS	3.50E-01	4.51E-02	3.06E-01	2.99E-01	9.48E-02	2.20E-01	1.78E-01	3.74E-02
	TOT	1.55E+00	1.97E-01	1.32E+00	1.27E+00	4.24E-01	7.45E-01	6.36E-01	2.76E-01
35	WET	1.20E+00	1.51E-01	1.02E+00	9.68E-01	3.68E-01	5.25E-01	4.58E-01	1.15E-01
	BAS	3.50E-01	4.51E-02	3.06E-01	2.99E-01	9.48E-02	2.20E-01	1.78E-01	3.74E-02
	TOT	1.55E+00	1.97E-01	1.32E+00	1.27E+00	4.63E-01	7.45E-01	6.36E-01	1.52E-01
36	WET	1.20E+00	1.51E-01	1.02E+00	9.68E-01	3.29E-01	5.25E-01	4.58E-01	1.02E-01
	BAS	3.50E-01	4.51E-02	3.06E-01	2.99E-01	9.48E-02	2.20E-01	1.78E-01	3.74E-02
	TOT	1.55E+00	1.97E-01	1.32E+00	1.27E+00	4.24E-01	7.45E-01	6.36E-01	1.39E-01
37	WET	7.84E-01	9.03E-02	5.08E-01	4.84E-01	1.64E-01	2.63E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	9.59E-01	1.13E-01	6.61E-01	6.33E-01	2.12E-01	3.73E-01	3.18E-01	6.97E-02
38	WET	1.20E-02	1.51E-03	1.02E-02	9.68E-03	3.29E-03	5.25E-03	4.58E-03	1.54E-03
	BAS	3.50E-03	4.51E-04	3.06E-03	2.99E-03	9.48E-04	2.20E-03	1.78E-03	3.74E-04
	TOT	1.55E-02	1.97E-03	1.32E-02	1.27E-02	4.24E-03	7.45E-03	6.36E-03	1.91E-03
39	WET	1.20E+00	1.51E-01	1.02E+00	9.68E-01	3.29E-01	5.25E-01	4.58E-01	1.02E-01
	BAS	3.50E-01	4.51E-02	3.06E-01	2.99E-01	9.48E-02	2.20E-01	1.78E-01	3.74E-02
	TOT	1.55E+00	1.97E-01	1.32E+00	1.27E+00	4.24E-01	7.45E-01	6.36E-01	1.39E-01

40	WET	5.98E-01	7.57E-02	5.08E-01	4.84E-01	1.64E-01	2.63E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	7.73E-01	9.83E-02	6.61E-01	6.33E-01	2.12E-01	3.73E-01	3.18E-01	6.97E-02
41	WET	5.98E-01	7.57E-02	5.08E-01	4.84E-01	1.64E-01	2.63E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	7.73E-01	9.83E-02	6.61E-01	6.33E-01	2.12E-01	3.73E-01	3.18E-01	6.97E-02
42	WET	5.98E-01	7.57E-02	5.08E-01	4.84E-01	1.64E-01	2.63E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	7.73E-01	9.83E-02	6.61E-01	6.33E-01	2.12E-01	3.73E-01	3.18E-01	6.97E-02
43	WET	5.98E-01	7.57E-02	5.08E-01	4.84E-01	1.64E-01	2.63E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	7.73E-01	9.83E-02	6.61E-01	6.33E-01	2.12E-01	3.73E-01	3.18E-01	6.97E-02
44	WET	5.98E-01	6.50E-01	8.35E-01	6.12E-01	1.64E-01	3.34E-01	2.29E-01	5.10E-02
	BAS	1.75E-01	2.26E-02	1.53E-01	1.50E-01	4.74E-02	1.10E-01	8.91E-02	1.87E-02
	TOT	7.73E-01	6.73E-01	9.88E-01	7.62E-01	2.12E-01	4.44E-01	3.18E-01	6.97E-02
45	WET	2.54E+04	3.41E+03	2.37E+04	2.05E+04	7.17E+03	9.17E+03	7.28E+03	2.29E+03
	BAS	3.41E+03	8.38E+02	3.07E+03	3.31E+03	5.68E+02	1.80E+03	1.54E+03	5.25E+02
	TOT	2.89E+04	4.25E+03	2.68E+04	2.38E+04	7.74E+03	1.10E+04	8.82E+03	2.81E+03
46	WET	1.55E+02	3.66E+00	0.00E+00	4.20E+01	8.67E+00	1.53E+01	1.87E+01	1.02E+00
	BAS	1.53E+02	2.32E+00	1.12E+02	9.51E+01	2.30E+01	4.65E+01	1.99E+01	2.78E+01
	TOT	3.08E+02	5.98E+00	1.12E+02	1.37E+02	3.17E+01	6.17E+01	3.86E+01	2.88E+01
48	WET	6.63E+02	3.28E+01	5.35E+02	5.42E+02	2.25E+02	3.47E+02	2.52E+02	3.29E+01
	BAS	1.45E+01	1.10E+02	1.61E+01	1.52E+01	3.19E+00	1.26E+01	1.01E+01	5.00E+01
	TOT	6.77E+02	1.43E+02	5.51E+02	5.57E+02	2.29E+02	3.59E+02	2.62E+02	8.29E+01
49	WET	4.94E+03	2.41E+02	4.26E+03	4.09E+03	9.08E+02	2.16E+03	1.67E+03	2.21E+02
	BAS	6.96E+01	1.57E+02	6.40E+01	6.29E+01	1.71E+01	5.05E+01	3.47E+01	7.26E+01
	TOT	5.01E+03	3.97E+02	4.32E+03	4.15E+03	9.25E+02	2.21E+03	1.70E+03	2.94E+02
50	WET	4.02E+06	2.76E+05	3.35E+06	3.00E+06	1.07E+06	1.71E+06	1.55E+06	1.51E+05
	BAS	1.50E+06	4.73E+05	1.14E+06	1.07E+06	4.50E+05	8.38E+05	6.41E+05	3.46E+05
	TOT	5.52E+06	7.49E+05	4.49E+06	4.07E+06	1.52E+06	2.55E+06	2.19E+06	4.97E+05
51	WET	3.43E+06	1.26E+05	3.40E+06	3.34E+06	4.45E+05	1.74E+06	1.25E+06	1.05E+05
	BAS	1.90E+04	4.33E+03	4.00E+04	3.05E+04	2.10E+03	1.25E+04	2.91E+04	3.08E+03
	TOT	3.45E+06	1.31E+05	3.44E+06	3.37E+06	4.48E+05	1.76E+06	1.28E+06	1.08E+05

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 3 TOTAL LOADINGS - November 21-22, 1982

In m3 for parameter 52
total counts for parameters 8 and 9
kg for all other parameters

PARA\SITE	3	5	6	7	8	9	10	11
52 WET	4.58E+06	2.80E+05	4.00E+06	3.85E+06	1.31E+06	2.15E+06	1.95E+06	1.82E+05
BAS	3.01E+06	7.94E+04	2.68E+06	2.66E+06	4.61E+05	2.41E+06	2.05E+06	6.60E+04
TOT	7.59E+06	3.59E+05	6.69E+06	6.50E+06	1.77E+06	4.56E+06	4.00E+06	2.48E+05
1 WET	9.15E-01	2.51E-01	1.09E+00	1.01E+00	2.91E-01	8.39E-01	4.55E-01	3.71E-02
BAS	6.03E-01	2.27E-02	6.83E-01	6.78E-01	1.50E-01	6.02E-01	6.20E-01	1.05E-01
TOT	1.52E+00	2.73E-01	1.77E+00	1.68E+00	4.41E-01	1.44E+00	1.07E+00	1.42E-01
2 WET	3.67E+01	1.22E+00	3.38E+01	2.84E+01	6.27E+00	2.96E+01	1.05E+01	1.53E+00
BAS	1.35E+01	2.08E+00	1.22E+01	5.32E+00	1.21E+00	3.62E+00	3.10E+00	2.71E-01
TOT	5.02E+01	3.30E+00	4.60E+01	3.38E+01	7.49E+00	3.32E+01	1.36E+01	1.80E+00
3 WET	1.09E+02	7.54E+00	9.34E+01	8.31E+01	2.20E+01	7.78E+01	3.09E+01	3.55E+00
BAS	2.27E+01	1.52E+00	1.64E+01	1.60E+01	4.05E+00	1.45E+01	1.64E+01	8.17E-01
TOT	1.32E+02	9.06E+00	1.10E+02	9.91E+01	2.61E+01	9.22E+01	4.73E+01	4.37E+00
4 WET	1.85E-01	1.30E-02	1.61E-01	1.55E-01	5.31E-02	8.63E-02	7.84E-02	8.21E-03
BAS	1.18E-01	3.52E-03	1.05E-01	1.04E-01	1.72E-02	9.60E-02	8.14E-02	2.94E-03
TOT	3.03E-01	1.65E-02	2.66E-01	2.59E-01	7.03E-02	1.82E-01	1.60E-01	1.11E-02
5 WET	1.90E+01	2.27E+00	1.37E+01	6.17E+01	1.31E+00	2.84E+00	2.64E+00	1.62E+00
BAS	7.85E+00	5.67E-01	1.22E+01	1.21E+01	4.61E-01	4.81E+00	2.05E+00	1.50E-01
TOT	2.68E+01	2.84E+00	2.59E+01	7.38E+01	1.77E+00	7.65E+00	4.68E+00	1.77E+00
6 WET	9.47E+01	2.11E+01	6.07E+01	5.01E+01	1.05E+01	2.45E+01	1.61E+01	1.79E+01
BAS	9.04E+00	5.11E-01	1.54E+01	9.44E+00	1.96E+00	7.22E+00	7.19E+00	6.38E-01
TOT	1.04E+02	2.16E+01	7.61E+01	5.95E+01	1.25E+01	3.17E+01	2.33E+01	1.86E+01
7 WET	2.26E+02	2.77E+01	1.29E+02	1.33E+02	2.06E+01	8.74E+01	2.54E+01	1.88E+01
BAS	1.83E+01	3.38E+00	6.89E+01	9.44E+00	7.52E-01	7.22E+00	3.17E+01	1.22E+00
TOT	2.45E+02	3.10E+01	1.98E+02	1.43E+02	2.14E+01	9.47E+01	5.71E+01	2.00E+01
8 WET	8.22E+13	1.70E+14	4.52E+13	4.72E+13	1.55E+13	2.94E+13	2.23E+13	9.39E+12
BAS	9.54E+12	1.75E+12	4.09E+12	1.73E+12	4.70E+11	2.04E+12	1.12E+12	7.75E+11
TOT	9.17E+13	1.72E+14	4.93E+13	4.90E+13	1.60E+13	3.15E+13	2.34E+13	1.02E+13
9 WET	9.45E+13	7.63E+13	6.24E+13	6.27E+13	1.87E+13	5.77E+13	7.42E+13	1.39E+13
BAS	2.69E+12	1.79E+11	4.58E+12	1.64E+12	2.01E+11	1.92E+12	7.14E+11	1.48E+11
TOT	9.72E+13	7.65E+13	6.70E+13	6.43E+13	1.89E+13	5.96E+13	7.49E+13	1.40E+13
10 WET	4.58E-03	2.80E-04	4.00E-03	3.85E-03	1.31E-03	2.15E-03	1.95E-03	1.82E-04
BAS	3.01E-03	7.94E-05	2.68E-03	2.66E-03	4.61E-04	2.41E-03	2.05E-03	6.60E-05
TOT	7.59E-03	3.59E-04	6.69E-03	6.50E-03	1.77E-03	4.56E-03	4.00E-03	2.48E-04
11 WET	3.13E-02	4.03E-03	1.63E-02	1.49E-02	3.95E-03	1.32E-02	2.61E-03	2.42E-03
BAS	4.63E-03	1.02E-04	4.15E-03	5.58E-03	1.33E-03	3.62E-03	1.15E-02	1.69E-04
TOT	3.59E-02	4.14E-03	2.05E-02	2.05E-02	5.29E-03	1.69E-02	1.41E-02	2.59E-03

12	WET	4.58E-03	2.13E-03	4.00E-03	3.85E-03	1.31E-03	6.89E-03	1.95E-03	8.76E-04
	BAS	3.01E-03	7.94E-05	2.68E-03	2.66E-03	4.61E-04	2.41E-03	2.05E-03	6.60E-05
	TOT	7.59E-03	2.21E-03	6.69E-03	6.50E-03	1.77E-03	9.30E-03	4.00E-03	9.42E-04
13	WET	2.47E-02	1.42E-03	1.96E-02	3.44E-02	6.28E-03	1.12E-02	1.39E-02	2.90E-03
	BAS	3.01E-03	1.02E-04	2.68E-03	8.49E-03	1.62E-03	4.83E-03	2.05E-03	1.39E-04
	TOT	2.77E-02	1.52E-03	2.23E-02	4.29E-02	7.90E-03	1.60E-02	1.59E-02	3.04E-03
14	WET	9.15E-03	1.33E-03	8.00E-03	7.69E-03	2.62E-03	4.31E-03	3.90E-03	4.79E-04
	BAS	6.03E-03	1.59E-04	5.37E-03	5.32E-03	9.22E-04	4.81E-03	4.10E-03	1.32E-04
	TOT	1.52E-02	1.49E-03	1.34E-02	1.30E-02	3.54E-03	9.12E-03	8.00E-03	6.11E-04
15	WET	9.15E-03	1.33E-03	8.00E-03	7.69E-03	2.62E-03	4.31E-03	3.90E-03	7.11E-04
	BAS	6.03E-03	1.59E-04	5.37E-03	5.32E-03	9.22E-04	4.81E-03	4.10E-03	1.32E-04
	TOT	1.52E-02	1.49E-03	1.34E-02	1.30E-02	3.54E-03	9.12E-03	8.00E-03	8.43E-04
16	WET	9.15E-03	1.33E-03	8.00E-03	7.69E-03	2.62E-03	4.31E-03	3.90E-03	3.64E-04
	BAS	6.03E-03	1.59E-04	5.37E-03	5.32E-03	9.22E-04	4.81E-03	4.10E-03	1.32E-04
	TOT	1.52E-02	1.49E-03	1.34E-02	1.30E-02	3.54E-03	9.12E-03	8.00E-03	4.96E-04
17	WET	2.29E-02	1.40E-03	2.00E-02	1.92E-02	6.54E-03	1.08E-02	9.76E-03	9.09E-04
	BAS	1.51E-02	3.97E-04	1.34E-02	1.33E-02	2.30E-03	1.20E-02	1.02E-02	3.30E-04
	TOT	3.80E-02	1.80E-03	3.34E-02	3.25E-02	8.85E-03	2.28E-02	2.00E-02	1.24E-03
18	WET	9.15E-03	5.60E-04	8.00E-03	7.69E-03	2.62E-03	4.31E-03	3.90E-03	3.64E-04
	BAS	6.03E-03	1.59E-04	5.37E-03	5.32E-03	9.22E-04	4.81E-03	4.10E-03	1.32E-04
	TOT	1.52E-02	7.19E-04	1.34E-02	1.30E-02	3.54E-03	9.12E-03	8.00E-03	4.96E-04
19	WET	2.38E-02	1.16E-03	1.86E-02	1.81E-02	5.92E-03	1.28E-02	7.81E-03	7.82E-04
	BAS	5.61E-03	2.27E-04	4.87E-03	4.80E-03	6.79E-04	4.77E-03	8.19E-03	1.91E-04
	TOT	2.94E-02	1.39E-03	2.35E-02	2.29E-02	6.60E-03	1.76E-02	1.60E-02	9.73E-04
20	WET	1.83E-02	1.12E-03	1.60E-02	1.54E-02	5.23E-03	8.62E-03	7.81E-03	7.27E-04
	BAS	1.21E-02	3.18E-04	1.07E-02	1.06E-02	1.84E-03	9.62E-03	8.19E-03	2.64E-04
	TOT	3.04E-02	1.44E-03	2.67E-02	2.60E-02	7.08E-03	1.82E-02	1.60E-02	9.91E-04
21	WET	2.38E-02	1.16E-03	1.86E-02	1.81E-02	5.92E-03	1.28E-02	7.81E-03	7.82E-04
	BAS	5.61E-03	2.27E-04	4.87E-03	4.80E-03	6.79E-04	4.77E-03	8.19E-03	1.91E-04
	TOT	2.94E-02	1.39E-03	2.35E-02	2.29E-02	6.60E-03	1.76E-02	1.60E-02	9.73E-04
22	WET	4.58E-03	2.80E-04	4.00E-03	3.85E-03	1.31E-03	2.15E-03	1.95E-03	1.82E-04
	BAS	3.01E-03	7.94E-05	2.68E-03	2.66E-03	4.61E-04	2.41E-03	2.05E-03	6.60E-05
	TOT	7.59E-03	3.59E-04	6.69E-03	6.50E-03	1.77E-03	4.56E-03	4.00E-03	2.48E-04
23	WET	4.58E-03	2.80E-04	4.00E-03	3.85E-03	1.31E-03	2.15E-03	1.95E-03	1.82E-04
	BAS	3.01E-03	7.94E-05	2.68E-03	2.66E-03	4.61E-04	2.41E-03	2.05E-03	6.60E-05
	TOT	7.59E-03	3.59E-04	6.69E-03	6.50E-03	1.77E-03	4.56E-03	4.00E-03	2.48E-04
24	WET	2.29E-02	1.40E-03	2.00E-02	1.92E-02	6.54E-03	1.08E-02	9.76E-03	9.09E-04
	BAS	1.51E-02	3.97E-04	1.34E-02	1.33E-02	2.30E-03	1.20E-02	1.02E-02	3.30E-04
	TOT	3.80E-02	1.80E-03	3.34E-02	3.25E-02	8.85E-03	2.28E-02	2.00E-02	1.24E-03
25	WET	9.15E-03	5.60E-04	8.00E-03	7.69E-03	2.62E-03	4.31E-03	3.90E-03	3.64E-04
	BAS	6.03E-03	1.59E-04	5.37E-03	5.32E-03	9.22E-04	4.81E-03	4.10E-03	1.32E-04
	TOT	1.52E-02	7.19E-04	1.34E-02	1.30E-02	3.54E-03	9.12E-03	8.00E-03	4.96E-04

26	WET	2.29E-02	1.40E-03	2.00E-02	1.92E-02	6.54E-03	1.08E-02	1.54E-02	9.09E-04
	BAS	1.51E-02	3.97E-04	1.34E-02	1.33E-02	2.30E-03	1.20E-02	1.02E-02	3.30E-04
	TOT	3.80E-02	1.80E-03	3.34E-02	3.25E-02	8.85E-03	2.28E-02	2.56E-02	1.24E-03
27	WET	1.59E-01	0.00E+00	8.00E-02	1.33E-01	2.62E-02	4.31E-02	3.90E-02	5.92E-03
	BAS	6.03E-02	1.59E-03	5.37E-02	5.32E-02	9.22E-03	4.81E-02	4.10E-02	1.32E-03
	TOT	2.19E-01	1.59E-03	1.34E-01	1.86E-01	3.54E-02	9.12E-02	8.00E-02	7.24E-03
28	WET	2.29E-02	1.40E-03	2.00E-02	1.92E-02	6.54E-03	1.08E-02	9.76E-03	9.09E-04
	BAS	1.51E-02	3.97E-04	1.34E-02	1.33E-02	2.30E-03	1.20E-02	1.02E-02	3.30E-04
	TOT	3.80E-02	1.80E-03	3.34E-02	3.25E-02	8.85E-03	2.28E-02	2.00E-02	1.24E-03
29	WET	4.58E-03	2.80E-04	4.00E-03	3.85E-03	1.31E-03	2.15E-03	1.95E-03	4.13E-04
	BAS	3.01E-03	7.94E-05	2.68E-03	2.66E-03	4.61E-04	2.41E-03	2.05E-03	6.60E-05
	TOT	7.59E-03	3.59E-04	6.69E-03	6.50E-03	1.77E-03	4.56E-03	4.00E-03	4.79E-04
30	WET	2.29E-02	1.40E-03	2.00E-02	1.92E-02	6.54E-03	1.08E-02	3.23E-02	9.09E-04
	BAS	1.51E-02	3.97E-04	1.34E-02	1.33E-02	2.30E-03	1.20E-02	1.02E-02	3.30E-04
	TOT	3.80E-02	1.80E-03	3.34E-02	3.25E-02	8.85E-03	2.28E-02	4.26E-02	1.24E-03
31	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	9.09E-03
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	1.24E-02
32	WET	1.40E+00	0.00E+00	9.97E-01	7.94E-01	1.31E-01	2.15E-01	1.95E-01	0.00E+00
	BAS	3.01E-01	7.94E-03	2.68E-01	2.66E-01	4.61E-02	2.41E-01	2.05E-01	8.97E-03
	TOT	1.70E+00	7.94E-03	1.27E+00	1.06E+00	1.77E-01	4.56E-01	4.00E-01	8.97E-03
33	WET	9.15E-01	5.60E-02	8.00E-01	7.69E-01	2.62E-01	4.31E-01	3.90E-01	3.64E-02
	BAS	6.03E-01	1.59E-02	5.37E-01	5.32E-01	9.22E-02	4.81E-01	4.10E-01	1.32E-02
	TOT	1.52E+00	7.19E-02	1.34E+00	1.30E+00	3.54E-01	9.12E-01	8.00E-01	4.96E-02
34	WET	4.58E-01	2.80E-02	4.00E-01	3.85E-01	1.31E-01	2.15E-01	1.95E-01	1.82E-02
	BAS	3.01E-01	7.94E-03	2.68E-01	2.66E-01	4.61E-02	2.41E-01	2.05E-01	6.60E-03
	TOT	7.59E-01	3.59E-02	6.69E-01	6.50E-01	1.77E-01	4.56E-01	4.00E-01	2.48E-02
35	WET	4.58E-01	2.80E-02	4.00E-01	3.85E-01	1.31E-01	2.15E-01	1.95E-01	1.82E-02
	BAS	3.01E-01	7.94E-03	2.68E-01	2.66E-01	4.61E-02	2.41E-01	2.05E-01	6.60E-03
	TOT	7.59E-01	3.59E-02	6.69E-01	6.50E-01	1.77E-01	4.56E-01	4.00E-01	2.48E-02
36	WET	4.58E-01	2.80E-02	4.00E-01	5.44E-01	1.31E-01	2.15E-01	1.95E-01	1.82E-02
	BAS	3.01E-01	7.94E-03	2.68E-01	2.66E-01	4.61E-02	2.41E-01	2.05E-01	6.60E-03
	TOT	7.59E-01	3.59E-02	6.69E-01	8.10E-01	1.77E-01	4.56E-01	4.00E-01	2.48E-02
37	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	9.09E-03
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	1.24E-02
38	WET	4.58E-03	6.67E-04	4.00E-03	3.85E-03	1.31E-03	2.15E-03	1.95E-03	1.82E-04
	BAS	3.01E-03	7.94E-05	2.68E-03	2.66E-03	4.61E-04	2.41E-03	2.05E-03	6.60E-05
	TOT	7.59E-03	7.47E-04	6.69E-03	6.50E-03	1.77E-03	4.56E-03	4.00E-03	2.48E-04
39	WET	4.58E-01	2.80E-02	4.00E-01	3.85E-01	1.31E-01	2.15E-01	1.95E-01	1.82E-02
	BAS	3.01E-01	7.94E-03	2.68E-01	2.66E-01	4.61E-02	2.41E-01	2.05E-01	6.60E-03
	TOT	7.59E-01	3.59E-02	6.69E-01	6.50E-01	1.77E-01	4.56E-01	4.00E-01	2.48E-02

40	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	9.09E-03
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	1.24E-02
41	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	9.09E-03
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	1.24E-02
42	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	9.09E-03
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	1.24E-02
43	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	9.09E-03
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	1.24E-02
44	WET	2.29E-01	1.40E-02	2.00E-01	1.92E-01	6.54E-02	1.08E-01	9.76E-02	3.97E-02
	BAS	1.51E-01	3.97E-03	1.34E-01	1.33E-01	2.30E-02	1.20E-01	1.02E-01	3.30E-03
	TOT	3.80E-01	1.80E-02	3.34E-01	3.25E-01	8.85E-02	2.28E-01	2.00E-01	4.30E-02
45	WET	1.11E+04	1.22E+03	7.19E+03	6.60E+03	1.66E+03	4.34E+03	4.14E+03	4.41E+02
	BAS	2.94E+03	1.48E+02	2.69E+03	2.94E+03	2.76E+02	1.97E+03	1.77E+03	9.26E+01
	TOT	1.41E+04	1.37E+03	9.88E+03	9.54E+03	1.94E+03	6.31E+03	5.91E+03	5.33E+02
46	WET	0.00E+00	2.23E+00	2.03E+00	1.27E+00	3.91E+00	3.42E-01	5.59E+02	0.00E+00
	BAS	1.32E+02	4.09E-01	9.82E+01	8.44E+01	1.12E+01	5.08E+01	2.29E+01	4.91E+00
	TOT	1.32E+02	2.63E+00	1.00E+02	8.57E+01	1.51E+01	5.11E+01	5.82E+02	4.91E+00
48	WET	3.49E+01	1.40E+01	4.75E+01	5.80E+01	4.20E+01	1.06E+02	6.75E+01	2.27E+00
	BAS	1.24E+01	1.94E+01	1.41E+01	1.35E+01	1.55E+00	1.38E+01	1.17E+01	8.82E+00
	TOT	4.73E+01	3.34E+01	6.17E+01	7.15E+01	4.36E+01	1.20E+02	7.92E+01	1.11E+01
49	WET	1.15E+03	6.67E+01	8.17E+02	7.50E+02	1.79E+02	5.05E+02	4.08E+02	2.80E+01
	BAS	5.99E+01	2.76E+01	5.61E+01	5.58E+01	8.29E+00	5.52E+01	3.99E+01	1.28E+01
	TOT	1.21E+03	9.42E+01	8.73E+02	8.06E+02	1.87E+02	5.60E+02	4.48E+02	4.08E+01
50	WET	1.87E+06	4.23E+04	1.76E+06	1.69E+06	6.69E+05	9.09E+05	8.75E+05	1.43E+04
	BAS	1.29E+06	8.33E+04	1.00E+06	9.48E+05	2.19E+05	9.16E+05	7.37E+05	6.12E+04
	TOT	3.17E+06	1.26E+05	2.76E+06	2.63E+06	8.88E+05	1.83E+06	1.61E+06	7.55E+04
51	WET	4.35E+05	2.12E+04	6.52E+05	5.11E+05	1.32E+05	4.55E+05	3.20E+05	1.41E+04
	BAS	1.63E+04	7.63E+02	3.50E+04	2.71E+04	1.02E+03	1.37E+04	3.34E+04	5.44E+02
	TOT	4.51E+05	2.20E+04	6.87E+05	5.38E+05	1.33E+05	4.69E+05	3.53E+05	1.46E+04

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
 SPRING RUNOFF TOTAL LOADINGS - March 10 to April 28, 1993

PARK/SITE	3	5	6	7	8	9	10	11	12
52	5.98E+07	4.83E+06	5.42E+07	5.31E+07	1.38E+07	3.81E+07	3.63E+07	3.69E+06	1.26E+06
1	4.98E+01	5.78E+00	4.29E+01	3.31E+01	8.90E+00	3.17E+01	2.94E+01	3.03E+00	1.25E+00
2	5.60E+02	6.94E+01	4.64E+02	5.16E+02	8.43E+01	5.58E+02	2.99E+02	4.09E+01	2.13E+02
3	1.27E+03	1.56E+02	1.09E+03	9.69E+02	2.27E+02	1.27E+04	7.87E+02	1.06E+02	5.10E+01
5	6.37E+02	6.94E+01	5.31E+02	5.33E+02	1.23E+02	6.37E+02	4.64E+02	4.93E+01	2.39E+01
6	1.48E+03	3.50E+02	9.93E+02	7.64E+02	2.23E+02	5.68E+02	4.14E+02	2.26E+02	9.78E+01
7	2.43E+03	4.86E+02	1.79E+03	1.61E+03	3.85E+02	1.49E+03	9.43E+02	3.22E+02	1.95E+02
8	5.49E+14	2.93E+14	1.88E+14	1.17E+14	4.81E+13	1.30E+14	9.90E+13	2.76E+13	1.07E+13
9	2.63E+14	9.02E+13	2.16E+14	2.49E+14	1.07E+14	2.09E+14	1.68E+14	2.02E+13	9.26E+12
46	1.51E+03	3.35E+01	3.32E+02	3.89E+02	9.85E+01	2.11E+02	2.03E+02	8.34E+01	1.32E+02
48	3.63E+03	1.73E+02	2.44E+03	1.61E+03	5.03E+02	1.15E+03	8.07E+02	1.18E+02	1.53E+02
49	1.91E+04	2.14E+03	1.59E+04	1.35E+04	3.34E+03	1.55E+04	1.28E+04	9.66E+02	5.51E+02
50	2.76E+07	4.20E+06	2.40E+07	2.18E+07	5.60E+06	1.48E+07	1.38E+07	3.33E+06	9.31E+05
51	1.11E+07	6.23E+05	9.73E+06	9.07E+06	2.11E+06	1.22E+07	9.95E+06	4.86E+05	1.21E+05
53	2.46E+05	1.30E+04	2.49E+05	2.36E+05	9.06E+04	1.80E+05	1.57E+05	1.17E+04	4.07E+03
54	1.78E+13	8.68E+12	9.17E+12	8.13E+12	2.21E+12	7.68E+12	5.89E+12	1.76E+12	2.93E+11
55	7.85E+13	2.81E+13	5.55E+13	4.43E+13	1.79E+13	8.84E+13	2.99E+13	5.71E+12	2.44E+12

In m3 for parameter 52

kg for parameters 1-3, 5-7, 46, 48-51, and 53

total counts for parameters 8, 9, 54, and 55

Table N-3

Dry Event Fluxes and Wet Event Loadings
from Humber River Subbasins

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
 DRY EVENT 1 FLUX DIFFERENCES - October 5, 1982

In counts/s for parameters 8 and 9 and ks/s for all other parameters.

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
1	4.39E-07	2.51E-07	3.33E-07	-2.62E-07	-1.47E-08	-1.35E-07
2	2.19E-06	2.03E-06	8.62E-07	5.67E-06	1.08E-06	1.83E-06
3	1.16E-05	6.77E-06	2.60E-06	2.19E-06	-2.47E-06	2.37E-06
4	5.76E-08	2.88E-08	9.34E-09	1.73E-09	1.70E-08	5.76E-09
5	1.45E-06	7.70E-07	4.78E-07	1.31E-06	9.83E-06	-5.87E-06
6	5.09E-06	3.28E-06	2.03E-06	-4.20E-07	1.03E-06	-1.83E-06
7	2.24E-05	1.26E-06	3.87E-06	6.78E-06	-1.43E-05	-1.47E-06
8	7.96E+05	7.86E+05	2.46E+06	3.04E+06	1.44E+05	2.46E+06
9	5.06E+05	3.36E+05	4.71E+05	9.36E+04	7.90E+05	5.36E+05
10	1.45E-09	7.70E-10	2.10E-10	4.00E-11	4.30E-10	1.60E-10
11	8.15E-09	2.23E-09	5.36E-10	-2.14E-10	-4.82E-09	-1.18E-09
12	1.45E-09	7.70E-10	2.10E-10	4.00E-11	4.30E-10	1.60E-10
13	1.45E-09	2.72E-09	4.42E-10	-1.20E-10	4.30E-09	-5.73E-09
14	2.90E-09	1.54E-09	4.20E-10	8.00E-11	8.60E-10	3.20E-10
15	2.90E-09	1.54E-09	4.20E-10	8.00E-11	8.60E-10	3.20E-10
16	2.90E-09	1.54E-09	4.20E-10	8.00E-11	8.60E-10	3.20E-10
17	7.25E-09	3.85E-09	1.05E-09	2.00E-10	2.15E-09	8.00E-10
18	2.90E-09	1.54E-09	4.20E-10	8.00E-11	8.60E-10	3.20E-10
19	5.80E-09	1.13E-09	6.08E-10	1.06E-10	-2.15E-09	1.91E-10
20	5.80E-09	3.08E-09	8.40E-10	1.60E-10	1.72E-09	6.40E-10
21	5.80E-09	1.13E-09	6.08E-10	1.06E-10	-2.15E-09	1.91E-10
22	1.45E-09	7.70E-10	2.10E-10	4.00E-11	4.30E-10	1.60E-10
23	1.45E-09	7.70E-10	2.10E-10	4.00E-11	4.30E-10	1.60E-10
24	7.25E-09	3.85E-09	1.05E-09	2.00E-10	2.15E-09	8.00E-10
25	2.90E-09	1.54E-09	4.20E-10	8.00E-11	8.60E-10	3.20E-10
26	7.25E-09	3.85E-09	1.05E-09	2.00E-10	2.15E-09	8.00E-10
27	2.90E-08	1.54E-08	4.20E-09	8.00E-10	8.60E-09	3.20E-09
28	7.25E-09	3.85E-09	1.05E-09	2.00E-10	2.15E-09	8.00E-10
29	1.45E-09	7.70E-10	2.10E-10	4.00E-11	4.30E-10	1.60E-10
30	7.25E-09	3.85E-09	1.05E-09	2.00E-10	2.15E-09	8.00E-10
31	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
32	1.45E-07	7.70E-08	2.85E-08	-3.54E-09	4.30E-08	1.60E-08
33	2.90E-07	1.54E-07	4.20E-08	8.00E-09	8.60E-08	3.20E-08
34	1.45E-07	7.70E-08	2.10E-08	4.00E-09	4.30E-08	1.60E-08
35	1.45E-07	7.70E-08	2.10E-08	4.00E-09	4.30E-08	1.60E-08
36	1.45E-07	7.70E-08	2.10E-08	4.00E-09	4.30E-08	1.60E-08
37	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
38	1.45E-09	7.70E-10	2.10E-10	4.00E-11	4.30E-10	1.60E-10
39	1.45E-07	7.70E-08	2.10E-08	4.00E-09	4.30E-08	1.60E-08
40	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
41	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
42	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
43	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
44	7.25E-08	3.85E-08	1.05E-08	2.00E-09	2.15E-08	8.00E-09
45	1.25E-03	4.62E-04	2.95E-04	1.70E-04	1.22E-03	-4.15E-04
46	1.62E-05	1.87E-05	1.56E-05	-1.43E-05	4.92E-05	4.84E-05
48	8.25E-06	2.59E-06	2.81E-05	3.30E-05	2.62E-06	-6.19E-05
49	2.82E-05	1.39E-05	4.08E-05	4.60E-05	1.36E-05	-8.16E-05
50	5.22E-01	3.66E-01	1.95E-01	6.75E-02	5.73E-02	1.05E-01
51	2.36E-02	1.71E-03	1.73E-03	6.69E-04	1.67E-03	-1.29E-02

TORONTO AREA MANAGEMENT STRATEGY STUDY
 DRY EVENT 2 FLUX DIFFERENCES - October 26, 1982

In counts/s for parameters 8 and 9 and kd/s for all other parameters.

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
1	4.63E-07	4.31E-07	1.27E-07	-9.83E-08	-7.31E-08	-1.45E-07
2	2.31E-06	3.47E-06	3.28E-07	2.29E-06	6.51E-07	6.66E-06
3	1.22E-05	1.16E-05	9.90E-07	9.24E-07	-4.52E-06	5.29E-06
4	6.08E-08	4.93E-08	3.56E-09	8.71E-10	1.56E-08	8.23E-09
5	1.53E-06	1.32E-06	1.82E-07	5.32E-07	1.18E-05	-6.19E-06
6	5.37E-06	5.63E-06	7.72E-07	-1.29E-07	4.26E-07	-1.51E-06
7	2.37E-05	2.15E-06	1.47E-06	2.78E-06	-1.44E-05	5.68E-06
8	8.40E+05	1.35E+06	9.38E+05	1.26E+06	-8.97E+04	6.85E+06
9	5.34E+05	5.77E+05	1.79E+05	4.64E+04	8.73E+05	9.34E+05
10	1.53E-09	1.32E-09	8.00E-11	2.00E-11	3.70E-10	2.00E-10
11	8.60E-09	3.82E-09	2.04E-10	-7.56E-11	-5.67E-09	-1.48E-09
12	1.53E-09	1.32E-09	8.00E-11	2.00E-11	3.70E-10	2.00E-10
13	1.53E-09	4.65E-09	1.68E-10	-3.96E-11	4.10E-09	-6.89E-09
14	3.06E-09	2.64E-09	1.60E-10	4.00E-11	7.40E-10	4.00E-10
15	3.06E-09	2.64E-09	1.60E-10	4.00E-11	7.40E-10	4.00E-10
16	3.06E-09	2.64E-09	1.60E-10	4.00E-11	7.40E-10	4.00E-10
17	7.65E-09	6.60E-09	4.00E-10	1.00E-10	1.85E-09	1.00E-09
18	3.06E-09	2.64E-09	1.60E-10	4.00E-11	7.40E-10	4.00E-10
19	6.12E-09	1.95E-09	2.32E-10	5.39E-11	-2.25E-09	4.46E-10
20	6.12E-09	5.28E-09	3.20E-10	8.00E-11	1.48E-09	8.00E-10
21	6.12E-09	1.95E-09	2.32E-10	5.39E-11	-2.25E-09	4.46E-10
22	1.53E-09	1.32E-09	8.00E-11	2.00E-11	3.70E-10	2.00E-10
23	1.53E-09	1.32E-09	8.00E-11	2.00E-11	3.70E-10	2.00E-10
24	7.65E-09	6.60E-09	4.00E-10	1.00E-10	1.85E-09	1.00E-09
25	3.06E-09	2.64E-09	1.60E-10	4.00E-11	7.40E-10	4.00E-10
26	7.65E-09	6.60E-09	4.00E-10	1.00E-10	1.85E-09	1.00E-09
27	3.06E-08	2.64E-08	1.60E-09	4.00E-10	7.40E-09	4.00E-09
28	7.65E-09	6.60E-09	4.00E-10	1.00E-10	1.85E-09	1.00E-09
29	1.53E-09	1.32E-09	8.00E-11	2.00E-11	3.70E-10	2.00E-10
30	7.65E-09	6.60E-09	4.00E-10	1.00E-10	1.85E-09	1.00E-09
31	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
32	1.53E-07	1.32E-07	1.09E-08	-8.72E-10	3.70E-08	2.00E-08
33	3.06E-07	2.64E-07	1.60E-08	4.00E-09	7.40E-08	4.00E-08
34	1.53E-07	1.32E-07	8.00E-09	2.00E-09	3.70E-08	2.00E-08
35	1.53E-07	1.32E-07	8.00E-09	2.00E-09	3.70E-08	2.00E-08
36	1.53E-07	1.32E-07	8.00E-09	2.00E-09	3.70E-08	2.00E-08
37	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
38	1.53E-09	1.32E-09	8.00E-11	2.00E-11	3.70E-10	2.00E-10
39	1.53E-07	1.32E-07	8.00E-09	2.00E-09	3.70E-08	2.00E-08
40	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
41	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
42	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
43	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
44	7.65E-08	6.60E-08	4.00E-09	1.00E-09	1.85E-08	1.00E-08
45	1.32E-03	7.91E-04	1.12E-04	7.35E-05	1.45E-03	-3.19E-04
46	1.71E-05	3.21E-05	5.95E-06	-5.44E-06	5.30E-05	5.11E-05
48	8.71E-06	4.45E-06	1.07E-05	1.37E-05	3.21E-06	-2.63E-05
49	2.98E-05	2.38E-05	1.55E-05	1.92E-05	1.41E-05	-3.24E-05
50	5.50E-01	6.27E-01	7.41E-02	3.07E-02	-2.97E-02	2.56E-01
51	2.50E-02	2.92E-03	6.59E-04	3.01E-04	4.97E-03	-1.48E-02

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 1 LOADING DIFFERENCES - October 20, 1982

In m3 for parameter 52
total counts for parameters 8 and 9
kg for all other parameters

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
52 WET	9.18E+02	8.24E+03	3.40E+04	3.10E+04	2.02E+04	-2.14E+04
BAS	8.40E+04	7.63E+04	1.43E+04	6.13E+03	1.35E+05	8.69E+04
TOT	8.49E+04	8.45E+04	4.83E+04	3.72E+04	1.55E+05	6.55E+04
1 WET	0.00E+00	0.00E+00	2.45E-02	8.58E-02	6.92E-04	1.48E-01
BAS	2.54E-02	2.49E-02	2.27E-02	-1.69E-02	2.49E-02	-5.74E-04
TOT	2.54E-02	2.49E-02	4.72E-02	6.90E-02	2.56E-02	1.47E-01
2 WET	3.03E-02	7.42E-02	3.98E-01	1.54E+00	5.94E-02	-2.10E+00
BAS	1.27E-01	2.01E-01	5.88E-02	4.76E-01	2.62E-01	6.72E-01
TOT	1.57E-01	2.75E-01	4.57E-01	2.01E+00	3.22E-01	-1.43E+00
3 WET	3.67E-03	1.68E-01	1.35E+00	2.42E+00	8.52E-01	-1.97E+00
BAS	6.72E-01	6.70E-01	1.77E-01	2.14E-01	4.29E-01	8.70E-01
TOT	6.76E-01	8.38E-01	1.53E+00	2.64E+00	1.28E+00	-1.10E+00
4 WET	0.00E+00	0.00E+00	7.17E-03	6.86E-03	0.00E+00	-1.40E-02
BAS	3.34E-03	2.85E-03	6.37E-04	2.69E-04	5.33E-03	3.39E-03
TOT	3.34E-03	2.85E-03	7.81E-03	7.13E-03	5.33E-03	-1.06E-02
5 WET	9.18E-04	7.82E-02	4.22E-01	6.53E-01	-7.91E-02	-1.08E+00
BAS	8.40E-02	7.63E-02	3.26E-02	1.14E-01	1.18E+00	-4.40E-01
TOT	8.49E-02	1.54E-01	4.55E-01	7.67E-01	1.10E+00	-1.52E+00
6 WET	1.12E-02	9.30E-01	5.22E+00	6.81E+00	6.51E-01	-8.39E+00
BAS	2.95E-01	3.25E-01	1.38E-01	-6.78E-03	4.27E-01	2.85E-02
TOT	3.06E-01	1.26E+00	5.36E+00	6.80E+00	1.08E+00	-8.36E+00
7 WET	1.22E+00	1.09E+00	8.78E+00	8.94E+00	1.27E+00	-1.38E+01
BAS	1.30E+00	1.24E-01	2.64E-01	6.07E-01	-3.76E-01	5.25E-01
TOT	2.52E+00	1.22E+00	9.04E+00	9.55E+00	8.94E-01	-1.33E+01
8 WET	8.43E+11	2.16E+12	1.36E+12	2.52E+14	3.12E+12	-2.56E+14
BAS	4.61E+10	7.79E+10	1.68E+11	2.82E+11	6.83E+10	6.32E+11
TOT	8.89E+11	2.24E+12	1.53E+12	2.52E+14	3.19E+12	-2.55E+14
9 WET	2.20E+12	4.43E+12	5.23E+12	1.80E+14	-3.75E+11	-1.84E+14
BAS	2.93E+10	3.33E+10	3.21E+10	1.41E+10	1.19E+11	1.31E+11
TOT	2.23E+12	4.46E+12	5.26E+12	1.80E+14	-2.56E+11	-1.83E+14
10 WET	9.18E-07	8.24E-06	3.40E-05	3.10E-05	2.02E-05	-2.14E-05
BAS	8.40E-05	7.63E-05	1.43E-05	6.13E-06	1.35E-04	8.69E-05
TOT	8.49E-05	8.45E-05	4.83E-05	3.72E-05	1.55E-04	6.55E-05

11	WET	0.00E+00	9.97E-05	4.97E-04	1.38E-04	1.13E-04	6.54E-05
	BAS	4.72E-04	2.21E-04	3.66E-05	-1.03E-05	-7.40E-05	-2.74E-05
	TOT	4.72E-04	3.20E-04	5.34E-04	1.27E-04	3.87E-05	3.81E-05
12	WET	9.18E-07	8.24E-06	3.13E-04	3.25E-04	2.02E-05	-5.94E-04
	BAS	8.40E-05	7.63E-05	1.43E-05	6.13E-06	1.35E-04	8.69E-05
	TOT	8.49E-05	8.45E-05	3.27E-04	3.31E-04	1.55E-04	-5.07E-04
13	WET	9.18E-07	0.00E+00	2.65E-04	1.16E-04	-9.18E-07	-3.07E-04
	BAS	8.40E-05	2.69E-04	3.01E-05	-3.82E-06	5.90E-04	-5.66E-04
	TOT	8.49E-05	2.69E-04	2.95E-04	1.12E-04	5.89E-04	-8.74E-04
14	WET	1.84E-06	1.65E-05	6.80E-05	1.21E-03	4.05E-05	-1.19E-03
	BAS	1.68E-04	1.53E-04	2.87E-05	1.23E-05	2.70E-04	1.74E-04
	TOT	1.70E-04	1.69E-04	9.66E-05	1.22E-03	3.10E-04	-1.01E-03
15	WET	1.84E-06	1.65E-05	6.80E-05	8.26E-04	4.05E-05	-8.06E-04
	BAS	1.68E-04	1.53E-04	2.87E-05	1.23E-05	2.70E-04	1.74E-04
	TOT	1.70E-04	1.69E-04	9.66E-05	8.38E-04	3.10E-04	-6.32E-04
16	WET	1.84E-06	1.65E-05	6.80E-05	6.21E-05	4.05E-05	-4.28E-05
	BAS	1.68E-04	1.53E-04	2.87E-05	1.23E-05	2.70E-04	1.74E-04
	TOT	1.70E-04	1.69E-04	9.66E-05	7.43E-05	3.10E-04	1.31E-04
17	WET	4.59E-06	4.12E-05	1.36E-04	1.89E-04	1.01E-04	-1.07E-04
	BAS	4.20E-04	3.81E-04	7.16E-05	3.07E-05	6.74E-04	4.35E-04
	TOT	4.25E-04	4.22E-04	2.08E-04	2.20E-04	7.76E-04	3.28E-04
18	WET	1.84E-06	1.65E-05	6.80E-05	6.21E-05	4.05E-05	-4.28E-05
	BAS	1.68E-04	1.53E-04	2.87E-05	1.23E-05	2.70E-04	1.74E-04
	TOT	1.70E-04	1.69E-04	9.66E-05	7.43E-05	3.10E-04	1.31E-04
19	WET	3.67E-06	1.24E-04	1.47E-04	1.24E-04	3.55E-04	7.83E-05
	BAS	3.36E-04	1.12E-04	4.15E-05	1.70E-05	8.46E-05	1.57E-04
	TOT	3.40E-04	2.36E-04	1.89E-04	1.41E-04	4.39E-04	2.35E-04
20	WET	3.67E-06	3.30E-05	1.36E-04	1.24E-04	8.09E-05	-8.56E-05
	BAS	3.36E-04	3.05E-04	5.73E-05	2.45E-05	5.39E-04	3.48E-04
	TOT	3.40E-04	3.38E-04	1.93E-04	1.49E-04	6.20E-04	2.62E-04
21	WET	3.67E-06	1.24E-04	1.47E-04	1.24E-04	3.55E-04	7.83E-05
	BAS	3.36E-04	1.12E-04	4.15E-05	1.70E-05	8.46E-05	1.57E-04
	TOT	3.40E-04	2.36E-04	1.89E-04	1.41E-04	4.39E-04	2.35E-04
22	WET	9.18E-07	8.24E-06	3.40E-05	3.10E-05	2.02E-05	-2.14E-05
	BAS	8.40E-05	7.63E-05	1.43E-05	6.13E-06	1.35E-04	8.69E-05
	TOT	8.49E-05	8.45E-05	4.83E-05	3.72E-05	1.55E-04	6.55E-05
23	WET	9.18E-07	8.24E-06	3.40E-05	3.10E-05	2.02E-05	-2.14E-05
	BAS	8.40E-05	7.63E-05	1.43E-05	6.13E-06	1.35E-04	8.69E-05
	TOT	8.49E-05	8.45E-05	4.83E-05	3.72E-05	1.55E-04	6.55E-05
24	WET	4.59E-06	4.12E-05	1.70E-04	1.55E-04	1.01E-04	-1.07E-04
	BAS	4.20E-04	3.81E-04	7.16E-05	3.07E-05	6.74E-04	4.35E-04
	TOT	4.25E-04	4.22E-04	2.42E-04	1.86E-04	7.76E-04	3.28E-04

25	WET	1.84E-06	1.65E-05	6.80E-05	6.21E-05	4.05E-05	-4.28E-05
	BAS	1.68E-04	1.53E-04	2.87E-05	1.23E-05	2.70E-04	1.74E-04
	TOT	1.70E-04	1.69E-04	9.66E-05	7.43E-05	3.10E-04	1.31E-04
26	WET	4.59E-06	4.12E-05	1.70E-04	1.55E-04	1.01E-04	-1.07E-04
	BAS	4.20E-04	3.81E-04	7.16E-05	3.07E-05	6.74E-04	4.35E-04
	TOT	4.25E-04	4.22E-04	2.42E-04	1.86E-04	7.76E-04	3.28E-04
27	WET	1.84E-05	1.65E-04	6.80E-04	-6.80E-04	4.05E-04	8.72E-04
	BAS	1.68E-03	1.53E-03	2.87E-04	1.23E-04	2.70E-03	1.74E-03
	TOT	1.70E-03	1.69E-03	9.66E-04	-5.57E-04	3.10E-03	2.61E-03
28	WET	4.59E-06	4.12E-05	1.70E-04	1.55E-04	1.01E-04	-1.07E-04
	BAS	4.20E-04	3.81E-04	7.16E-05	3.07E-05	6.74E-04	4.35E-04
	TOT	4.25E-04	4.22E-04	2.42E-04	1.86E-04	7.76E-04	3.28E-04
29	WET	9.18E-07	8.24E-06	3.40E-05	3.10E-05	2.02E-05	-2.14E-05
	BAS	8.40E-05	7.63E-05	1.43E-05	6.13E-06	1.35E-04	8.69E-05
	TOT	8.49E-05	8.45E-05	4.83E-05	3.72E-05	1.55E-04	6.55E-05
30	WET	4.59E-06	4.12E-05	1.70E-04	1.55E-04	1.01E-04	-1.07E-04
	BAS	4.20E-04	3.81E-04	7.16E-05	3.07E-05	6.74E-04	4.35E-04
	TOT	4.25E-04	4.22E-04	2.42E-04	1.86E-04	7.76E-04	3.28E-04
31	WET	4.59E-05	4.12E-04	1.70E-03	1.55E-03	1.01E-03	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.22E-03	2.42E-03	1.86E-03	7.76E-03	3.28E-03
32	WET	9.18E-05	7.13E-03	1.02E-02	-3.69E-03	8.98E-03	-1.54E-02
	BAS	8.40E-03	7.63E-03	1.95E-03	9.91E-05	1.35E-02	8.69E-03
	TOT	8.49E-03	1.48E-02	1.21E-02	-3.59E-03	2.25E-02	-6.71E-03
33	WET	1.84E-04	1.65E-03	6.80E-03	6.21E-03	4.05E-03	-4.28E-03
	BAS	1.68E-02	1.53E-02	2.87E-03	1.23E-03	2.70E-02	1.74E-02
	TOT	1.70E-02	1.69E-02	9.66E-03	7.43E-03	3.10E-02	1.31E-02
34	WET	9.18E-05	4.08E-03	3.40E-03	3.10E-03	-1.23E-03	-2.14E-03
	BAS	8.40E-03	7.63E-03	1.43E-03	6.13E-04	1.35E-02	8.69E-03
	TOT	8.49E-03	1.17E-02	4.83E-03	3.72E-03	1.23E-02	6.55E-03
35	WET	9.18E-05	8.24E-04	3.40E-03	3.10E-03	2.02E-03	-2.14E-03
	BAS	8.40E-03	7.63E-03	1.43E-03	6.13E-04	1.35E-02	8.69E-03
	TOT	8.49E-03	8.45E-03	4.83E-03	3.72E-03	1.55E-02	6.55E-03
36	WET	9.18E-05	8.24E-04	3.40E-03	3.10E-03	2.02E-03	-2.14E-03
	BAS	8.40E-03	7.63E-03	1.43E-03	6.13E-04	1.35E-02	8.69E-03
	TOT	8.49E-03	8.45E-03	4.83E-03	3.72E-03	1.55E-02	6.55E-03
37	WET	4.59E-05	4.12E-04	1.70E-03	1.55E-03	1.01E-03	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.22E-03	2.42E-03	1.86E-03	7.76E-03	3.28E-03
38	WET	9.18E-07	7.61E-05	1.70E-04	-1.05E-04	-4.76E-05	-2.14E-05
	BAS	8.40E-05	7.63E-05	1.43E-05	6.13E-06	1.35E-04	8.69E-05
	TOT	8.49E-05	1.52E-04	1.84E-04	-9.84E-05	8.73E-05	6.55E-05

39	WET	9.18E-05	8.24E-04	3.40E-03	3.10E-03	2.02E-03	-2.14E-03
	BAS	8.40E-03	7.63E-03	1.43E-03	6.13E-04	1.35E-02	8.69E-03
	TOT	8.49E-03	8.45E-03	4.83E-03	3.72E-03	1.55E-02	6.55E-03
40	WET	4.59E-05	4.12E-04	1.70E-03	1.55E-03	1.01E-03	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.22E-03	2.42E-03	1.86E-03	7.76E-03	3.28E-03
41	WET	4.59E-05	4.12E-04	1.70E-03	1.55E-03	1.01E-03	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.22E-03	2.42E-03	1.86E-03	7.76E-03	3.28E-03
42	WET	4.59E-05	4.12E-04	1.70E-03	1.55E-03	1.01E-03	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.22E-03	2.42E-03	1.86E-03	7.76E-03	3.28E-03
43	WET	4.59E-05	4.12E-04	1.70E-03	1.55E-03	1.01E-03	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.22E-03	2.42E-03	1.86E-03	7.76E-03	3.28E-03
44	WET	4.59E-05	1.02E-03	1.70E-03	1.55E-03	4.02E-04	-1.07E-03
	BAS	4.20E-03	3.81E-03	7.16E-04	3.07E-04	6.74E-03	4.35E-03
	TOT	4.25E-03	4.84E-03	2.42E-03	1.86E-03	7.14E-03	3.28E-03
45	WET	0.00E+00	1.75E+02	3.51E+02	9.29E+02	-1.04E+02	-1.24E+03
	BAS	7.25E+01	4.57E+01	2.01E+01	1.79E+01	2.08E+02	2.76E+01
	TOT	7.25E+01	2.20E+02	3.71E+02	9.45E+02	1.04E+02	-1.21E+03
46	WET	1.68E+00	1.76E-01	6.19E+00	5.40E+01	-1.86E+00	-5.70E+01
	BAS	9.40E-01	1.85E+00	1.07E+00	-9.61E-01	6.58E+00	8.12E+00
	TOT	2.62E+00	2.03E+00	7.25E+00	5.30E+01	4.72E+00	-4.89E+01
48	WET	0.00E+00	3.28E-01	2.63E+00	1.29E+01	1.22E+00	-1.71E+01
	BAS	4.78E-01	2.57E-01	1.91E+00	3.08E+00	7.64E-01	-4.84E+00
	TOT	4.78E-01	5.85E-01	4.55E+00	1.60E+01	1.98E+00	-2.19E+01
49	WET	2.10E-01	1.69E+00	1.78E+01	6.68E+01	1.31E+00	-8.68E+01
	BAS	1.63E+00	1.37E+00	2.78E+00	4.32E+00	3.19E+00	-5.30E+00
	TOT	1.84E+00	3.07E+00	2.06E+01	7.11E+01	4.50E+00	-9.21E+01
50	WET	5.37E+01	5.56E+02	1.01E+04	2.17E+04	1.00E+04	-2.98E+04
	BAS	3.02E+04	3.62E+04	1.33E+04	8.17E+03	3.88E+04	4.59E+04
	TOT	3.03E+04	3.68E+04	2.34E+04	2.98E+04	4.88E+04	1.61E+04
51	WET	0.00E+00	4.61E+02	7.33E+03	9.14E+03	7.66E+02	-1.61E+04
	BAS	1.37E+03	1.69E+02	1.18E+02	7.83E+01	1.47E+03	-1.03E+03
	TOT	1.37E+03	6.30E+02	7.45E+03	9.21E+03	2.24E+03	-1.72E+04

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 2 LOADING DIFFERENCES - November 3-5, 1982

In m3 for parameter 52
total counts for parameters 8 and 9
ks for all other parameters

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
52 WET	4.58E+06	3.29E+06	1.02E+06	4.93E+05	1.81E+06	7.62E+05
BAS	1.78E+06	9.48E+05	3.74E+05	7.72E+04	2.64E+05	5.80E+04
TOT	6.36E+06	4.24E+06	1.39E+06	5.71E+05	2.08E+06	8.20E+05
1 WET	1.42E+00	9.35E-01	1.98E-01	5.97E-01	2.08E+00	1.11E+00
BAS	5.39E-01	3.09E-01	5.93E-01	-4.64E-01	-8.55E-02	-1.91E-01
TOT	1.96E+00	1.24E+00	7.91E-01	1.33E-01	2.00E+00	9.19E-01
2 WET	4.47E+01	2.65E+01	1.01E+01	9.95E-01	5.42E+01	-9.96E+00
BAS	2.70E+00	2.49E+00	1.53E+00	1.03E+01	7.98E-01	-2.14E+00
TOT	4.74E+01	2.90E+01	1.16E+01	1.13E+01	5.50E+01	-1.21E+01
3 WET	7.75E+01	4.67E+01	1.75E+01	5.72E+00	7.19E+01	2.31E+02
BAS	1.43E+01	8.33E+00	4.63E+00	4.01E+00	-4.62E+00	-2.03E-01
TOT	9.17E+01	5.51E+01	2.22E+01	9.72E+00	6.72E+01	2.31E+02
4 WET	1.29E-01	1.33E-01	6.38E-02	5.09E-03	1.26E-01	2.23E-02
BAS	7.08E-02	3.54E-02	1.66E-02	3.35E-03	1.06E-02	8.37E-04
TOT	2.00E-01	1.68E-01	8.04E-02	8.44E-03	1.37E-01	2.32E-02
5 WET	3.30E+01	2.15E+01	7.23E+00	2.61E+00	3.36E+01	6.75E-01
BAS	1.78E+00	9.48E-01	8.51E-01	2.37E+00	1.09E+01	-7.72E+00
TOT	3.48E+01	2.25E+01	8.08E+00	4.98E+00	4.45E+01	-7.04E+00
6 WET	5.97E+01	4.82E+01	5.55E+01	2.57E+01	5.19E+01	6.01E+01
BAS	6.26E+00	4.04E+00	3.61E+00	-7.10E-01	3.26E-01	-3.02E+00
TOT	6.59E+01	5.23E+01	5.91E+01	2.50E+01	5.22E+01	5.71E+01
7 WET	1.39E+02	1.29E+02	8.14E+01	1.46E+01	2.30E+02	-1.21E+01
BAS	2.75E+01	1.55E+00	6.88E+00	1.23E+01	-1.85E+01	-8.57E+00
TOT	1.67E+02	1.31E+02	8.83E+01	2.69E+01	2.11E+02	-2.06E+01
8 WET	1.90E+13	1.96E+13	4.01E+12	1.66E+13	1.48E+13	1.28E+14
BAS	9.78E+11	9.67E+11	4.39E+12	5.54E+12	4.97E+09	-7.81E+11
TOT	2.00E+13	2.05E+13	8.39E+12	2.22E+13	1.48E+13	1.27E+14
9 WET	3.99E+13	2.25E+13	1.61E+13	4.07E+13	1.48E+14	1.51E+14
BAS	6.21E+11	4.14E+11	8.38E+11	1.80E+11	8.09E+11	2.66E+11
TOT	4.05E+13	2.29E+13	1.69E+13	4.08E+13	1.49E+14	1.51E+14
10 WET	4.58E-03	3.29E-03	1.02E-03	4.93E-04	1.81E-03	7.62E-04
BAS	1.78E-03	9.48E-04	3.74E-04	7.72E-05	2.64E-04	5.80E-05
TOT	6.36E-03	4.24E-03	1.39E-03	5.71E-04	2.08E-03	8.20E-04

11	WET	7.61E-03	2.32E-02	9.75E-03	1.10E-02	5.37E-02	-2.51E-02
	BAS	1.00E-02	2.74E-03	9.54E-04	-3.71E-04	-6.48E-03	-1.48E-03
	TOT	1.76E-02	2.60E-02	1.07E-02	1.06E-02	4.72E-02	-2.66E-02
12	WET	4.58E-03	3.29E-03	1.02E-03	6.50E-03	2.32E-02	-8.50E-03
	BAS	1.78E-03	9.48E-04	3.74E-04	7.72E-05	2.64E-04	5.80E-05
	TOT	6.36E-03	4.24E-03	1.39E-03	6.57E-03	2.34E-02	-8.45E-03
13	WET	1.60E-02	9.40E-03	1.27E-02	-4.47E-03	3.22E-02	-2.64E-02
	BAS	1.78E-03	3.34E-03	7.86E-04	-2.06E-04	4.44E-03	-6.61E-03
	TOT	1.77E-02	1.27E-02	1.35E-02	-4.68E-03	3.66E-02	-3.30E-02
14	WET	9.15E-03	6.58E-03	2.04E-03	9.87E-04	3.63E-03	1.52E-03
	BAS	3.56E-03	1.90E-03	7.48E-04	1.54E-04	5.29E-04	1.16E-04
	TOT	1.27E-02	8.47E-03	2.79E-03	1.14E-03	4.15E-03	1.64E-03
15	WET	9.15E-03	6.58E-03	3.08E-03	-5.05E-05	3.63E-03	1.52E-03
	BAS	3.56E-03	1.90E-03	7.48E-04	1.54E-04	5.29E-04	1.16E-04
	TOT	1.27E-02	8.47E-03	3.83E-03	1.04E-04	4.15E-03	1.64E-03
16	WET	9.15E-03	6.58E-03	2.04E-03	9.87E-04	3.63E-03	1.52E-03
	BAS	3.56E-03	1.90E-03	7.48E-04	1.54E-04	5.29E-04	1.16E-04
	TOT	1.27E-02	8.47E-03	2.79E-03	1.14E-03	4.15E-03	1.64E-03
17	WET	2.29E-02	1.64E-02	5.10E-03	2.47E-03	9.06E-03	3.81E-03
	BAS	8.91E-03	4.74E-03	1.87E-03	3.86E-04	1.32E-03	2.90E-04
	TOT	3.18E-02	2.12E-02	6.97E-03	2.85E-03	1.04E-02	4.10E-03
18	WET	9.15E-03	6.58E-03	2.04E-03	9.87E-04	3.63E-03	1.52E-03
	BAS	3.56E-03	1.90E-03	7.48E-04	1.54E-04	5.29E-04	1.16E-04
	TOT	1.27E-02	8.47E-03	2.79E-03	1.14E-03	4.15E-03	1.64E-03
19	WET	1.83E-02	1.42E-02	4.25E-03	2.00E-03	8.85E-03	4.26E-03
	BAS	7.13E-03	1.40E-03	1.08E-03	2.06E-04	-3.12E-03	-1.80E-04
	TOT	2.54E-02	1.56E-02	5.33E-03	2.21E-03	5.73E-03	4.08E-03
20	WET	1.83E-02	1.32E-02	4.08E-03	1.97E-03	7.25E-03	3.05E-03
	BAS	7.13E-03	3.79E-03	1.50E-03	3.09E-04	1.06E-03	2.32E-04
	TOT	2.54E-02	1.69E-02	5.58E-03	2.28E-03	8.31E-03	3.28E-03
21	WET	1.83E-02	1.42E-02	4.25E-03	2.00E-03	8.85E-03	4.26E-03
	BAS	7.13E-03	1.40E-03	1.08E-03	2.06E-04	-3.12E-03	-1.80E-04
	TOT	2.54E-02	1.56E-02	5.33E-03	2.21E-03	5.73E-03	4.08E-03
22	WET	4.58E-03	3.29E-03	1.02E-03	4.93E-04	1.81E-03	7.62E-04
	BAS	1.78E-03	9.48E-04	3.74E-04	7.72E-05	2.64E-04	5.80E-05
	TOT	6.36E-03	4.24E-03	1.39E-03	5.71E-04	2.08E-03	8.20E-04
23	WET	4.58E-03	3.29E-03	1.02E-03	4.93E-04	1.81E-03	7.62E-04
	BAS	1.78E-03	9.48E-04	3.74E-04	7.72E-05	2.64E-04	5.80E-05
	TOT	6.36E-03	4.24E-03	1.39E-03	5.71E-04	2.08E-03	8.20E-04
24	WET	2.29E-02	1.64E-02	5.10E-03	2.47E-03	9.06E-03	3.81E-03
	BAS	8.91E-03	4.74E-03	1.87E-03	3.86E-04	1.32E-03	2.90E-04
	TOT	3.18E-02	2.12E-02	6.97E-03	2.85E-03	1.04E-02	4.10E-03

25	WET	9.15E-03	6.58E-03	2.04E-03	9.87E-04	3.63E-03	1.52E-03
	BAS	3.56E-03	1.90E-03	7.48E-04	1.54E-04	5.29E-04	1.16E-04
	TOT	1.27E-02	8.47E-03	2.79E-03	1.14E-03	4.15E-03	1.64E-03
26	WET	2.29E-02	1.64E-02	5.10E-03	2.47E-03	9.06E-03	3.81E-03
	BAS	8.91E-03	4.74E-03	1.87E-03	3.86E-04	1.32E-03	2.90E-04
	TOT	3.18E-02	2.12E-02	6.97E-03	2.85E-03	1.04E-02	4.10E-03
27	WET	9.15E-02	6.58E-02	2.04E-02	-2.04E-02	-1.57E-01	2.39E-01
	BAS	3.56E-02	1.90E-02	7.48E-03	1.54E-03	5.29E-03	1.16E-03
	TOT	1.27E-01	8.47E-02	2.79E-02	-1.89E-02	-1.52E-01	2.40E-01
28	WET	2.29E-02	1.64E-02	5.10E-03	2.47E-03	9.06E-03	3.81E-03
	BAS	8.91E-03	4.74E-03	1.87E-03	3.86E-04	1.32E-03	2.90E-04
	TOT	3.18E-02	2.12E-02	6.97E-03	2.85E-03	1.04E-02	4.10E-03
29	WET	4.58E-03	3.29E-03	1.02E-03	4.93E-04	1.81E-03	7.62E-04
	BAS	1.78E-03	9.48E-04	3.74E-04	7.72E-05	2.64E-04	5.80E-05
	TOT	6.36E-03	4.24E-03	1.39E-03	5.71E-04	2.08E-03	8.20E-04
30	WET	2.29E-02	1.64E-02	5.10E-03	2.47E-03	9.06E-03	3.81E-03
	BAS	8.91E-03	4.74E-03	1.87E-03	3.86E-04	1.32E-03	2.90E-04
	TOT	3.18E-02	2.12E-02	6.97E-03	2.85E-03	1.04E-02	4.10E-03
31	WET	2.29E-01	1.64E-01	5.10E-02	2.47E-02	9.06E-02	3.81E-02
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	2.85E-02	1.04E-01	4.10E-02
32	WET	4.58E-01	1.68E+00	3.85E-01	-2.34E-01	8.45E-01	-8.09E-01
	BAS	1.78E-01	9.48E-02	5.08E-02	-5.71E-03	2.64E-02	5.80E-03
	TOT	6.36E-01	1.78E+00	4.36E-01	-2.39E-01	8.71E-01	-8.03E-01
33	WET	9.15E-01	6.58E-01	2.04E-01	9.87E-02	3.63E-01	1.52E-01
	BAS	3.56E-01	1.90E-01	7.48E-02	1.54E-02	5.29E-02	1.16E-02
	TOT	1.27E+00	8.47E-01	2.79E-01	1.14E-01	4.15E-01	1.64E-01
34	WET	4.58E-01	3.29E-01	2.39E-01	-8.72E-02	1.81E-01	7.62E-02
	BAS	1.78E-01	9.48E-02	3.74E-02	7.72E-03	2.64E-02	5.80E-03
	TOT	6.36E-01	4.24E-01	2.76E-01	-7.94E-02	2.08E-01	8.20E-02
35	WET	4.58E-01	3.68E-01	1.15E-01	3.63E-02	1.42E-01	7.62E-02
	BAS	1.78E-01	9.48E-02	3.74E-02	7.72E-03	2.64E-02	5.80E-03
	TOT	6.36E-01	4.63E-01	1.52E-01	4.41E-02	1.68E-01	8.20E-02
36	WET	4.58E-01	3.29E-01	1.02E-01	4.93E-02	1.81E-01	7.62E-02
	BAS	1.78E-01	9.48E-02	3.74E-02	7.72E-03	2.64E-02	5.80E-03
	TOT	6.36E-01	4.24E-01	1.39E-01	5.71E-02	2.08E-01	8.20E-02
37	WET	2.29E-01	1.64E-01	5.10E-02	3.93E-02	9.06E-02	2.10E-01
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	4.31E-02	1.04E-01	2.13E-01
38	WET	4.58E-03	3.29E-03	1.54E-03	-2.53E-05	1.81E-03	7.62E-04
	BAS	1.78E-03	9.48E-04	3.74E-04	7.72E-05	2.64E-04	5.80E-05
	TOT	6.36E-03	4.24E-03	1.91E-03	5.19E-05	2.08E-03	8.20E-04

39	WET	4.58E-01	3.29E-01	1.02E-01	4.93E-02	1.81E-01	7.62E-02
	BAS	1.78E-01	9.18E-02	3.74E-02	7.72E-03	2.64E-02	5.80E-03
	TOT	6.36E-01	4.24E-01	1.39E-01	5.71E-02	2.08E-01	8.20E-02
40	WET	2.29E-01	1.64E-01	5.10E-02	2.47E-02	9.06E-02	3.81E-02
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	2.85E-02	1.04E-01	4.10E-02
41	WET	2.29E-01	1.64E-01	5.10E-02	2.47E-02	9.06E-02	3.81E-02
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	2.85E-02	1.04E-01	4.10E-02
42	WET	2.29E-01	1.64E-01	5.10E-02	2.47E-02	9.06E-02	3.81E-02
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	2.85E-02	1.04E-01	4.10E-02
43	WET	2.29E-01	1.64E-01	5.10E-02	2.47E-02	9.06E-02	3.81E-02
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	2.85E-02	1.04E-01	4.10E-02
44	WET	2.29E-01	1.64E-01	5.10E-02	5.99E-01	2.19E-01	-6.64E-01
	BAS	8.91E-02	4.74E-02	1.87E-02	3.86E-03	1.32E-02	2.90E-03
	TOT	3.18E-01	2.12E-01	6.97E-02	6.03E-01	2.32E-01	-6.61E-01
45	WET	7.28E+03	7.17E+03	2.29E+03	1.13E+03	6.04E+03	1.54E+03
	BAS	1.54E+03	5.68E+02	5.25E+02	3.13E+02	1.21E+03	-7.37E+02
	TOT	8.82E+03	7.74E+03	2.81E+03	1.44E+03	7.25E+03	8.01E+02
46	WET	1.87E+01	8.67E+00	1.02E+00	2.64E+00	1.47E+01	1.10E+02
	BAS	1.99E+01	2.30E+01	2.78E+01	-2.55E+01	5.21E+01	5.58E+01
	TOT	3.86E+01	3.17E+01	2.88E+01	-2.29E+01	6.67E+01	1.65E+02
48	WET	2.52E+02	2.25E+02	3.29E+01	-9.55E-02	6.55E+01	8.78E+01
	BAS	1.01E+01	3.19E+00	5.00E+01	6.03E+01	1.88E+00	-1.11E+02
	TOT	2.62E+02	2.28E+02	8.28E+01	6.02E+01	6.73E+01	-2.31E+01
49	WET	1.67E+03	9.08E+02	2.21E+02	1.96E+01	1.51E+03	6.14E+02
	BAS	3.47E+01	1.71E+01	7.26E+01	8.40E+01	1.11E+01	-1.50E+02
	TOT	1.70E+03	9.25E+02	2.94E+02	1.04E+02	1.52E+03	4.65E+02
50	WET	1.55E+06	1.07E+06	1.51E+05	1.25E+05	3.85E+05	7.35E+05
	BAS	6.41E+05	4.50E+05	3.46E+05	1.26E+05	-2.39E+04	-3.87E+04
	TOT	2.19E+06	1.52E+06	4.97E+05	2.52E+05	3.61E+05	6.97E+05
51	WET	1.25E+06	4.45E+05	1.05E+05	2.13E+04	1.64E+06	-3.19E+04
	BAS	2.91E+04	2.10E+03	3.08E+03	1.25E+03	-6.26E+02	-1.59E+04
	TOT	1.28E+06	4.48E+05	1.08E+05	2.25E+04	1.64E+06	-4.79E+04

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 3 LOADING DIFFERENCES - November 21-22, 1982

In m3 for parameter 52
total counts for parameters 8 and 9
ks for all other parameters

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
52 WET	1.95E+06	1.31E+06	1.82E+05	9.80E+04	5.85E+05	4.52E+05
BAS	2.05E+06	4.61E+05	6.60E+04	1.34E+04	1.50E+05	2.75E+05
TOT	4.00E+06	1.77E+06	2.48E+05	1.11E+05	7.35E+05	7.27E+05
1 WET	4.55E-01	2.91E-01	3.71E-02	2.14E-01	2.60E-01	-3.41E-01
BAS	6.20E-01	1.50E-01	1.05E-01	-8.20E-02	-9.26E-02	-9.77E-02
TOT	1.07E+00	4.41E-01	1.42E-01	1.31E-01	1.67E-01	-4.39E-01
2 WET	1.05E+01	6.27E+00	1.53E+00	-3.10E-01	1.17E+01	7.07E+00
BAS	3.10E+00	1.21E+00	2.71E-01	1.81E+00	1.01E+00	6.06E+00
TOT	1.36E+01	7.49E+00	1.80E+00	1.50E+00	1.27E+01	1.31E+01
3 WET	3.09E+01	2.20E+01	3.55E+00	3.99E+00	3.01E+01	1.87E+01
BAS	1.64E+01	4.05E+00	8.17E-01	7.03E-01	-4.48E+00	5.23E+00
TOT	4.73E+01	2.61E+01	4.37E+00	4.69E+00	2.57E+01	2.39E+01
4 WET	7.84E-02	5.31E-02	8.21E-03	4.76E-03	2.34E-02	1.68E-02
BAS	8.14E-02	1.72E-02	2.94E-03	5.81E-04	5.19E-03	1.11E-02
TOT	1.60E-01	7.03E-02	1.11E-02	5.34E-03	2.86E-02	2.79E-02
5 WET	2.64E+00	1.31E+00	1.62E+00	6.50E-01	5.77E+01	-4.50E+01
BAS	2.05E+00	4.61E-01	1.50E-01	4.17E-01	9.59E+00	-4.81E+00
TOT	4.68E+00	1.77E+00	1.77E+00	1.07E+00	6.73E+01	-4.98E+01
6 WET	1.61E+01	1.05E+01	1.79E+01	3.16E+00	2.34E+01	2.36E+01
BAS	7.19E+00	1.96E+00	6.38E-01	-1.27E-01	2.77E-01	-9.06E-01
TOT	2.33E+01	1.25E+01	1.86E+01	3.03E+00	2.37E+01	2.27E+01
7 WET	2.54E+01	2.06E+01	1.88E+01	8.91E+00	8.72E+01	6.54E+01
BAS	3.17E+01	7.52E-01	1.22E+00	2.17E+00	-2.30E+01	5.47E+00
TOT	5.71E+01	2.14E+01	2.00E+01	1.11E+01	6.42E+01	7.08E+01
8 WET	2.23E+13	1.55E+13	9.39E+12	1.61E+14	9.42E+12	-1.35E+14
BAS	1.12E+12	4.70E+11	7.75E+11	9.73E+11	1.38E+11	6.06E+12
TOT	2.34E+13	1.60E+13	1.02E+13	1.62E+14	9.56E+12	-1.29E+14
9 WET	7.42E+13	1.87E+13	1.39E+13	6.24E+13	-3.03E+13	-4.45E+13
BAS	7.14E+11	2.01E+11	1.48E+11	3.13E+10	7.22E+11	8.74E+11
TOT	7.49E+13	1.89E+13	1.40E+13	6.25E+13	-2.96E+13	-4.37E+13
10 WET	1.95E-03	1.31E-03	1.82E-04	9.80E-05	5.85E-04	4.52E-04
BAS	2.05E-03	4.61E-04	6.60E-05	1.34E-05	1.50E-04	2.75E-04
TOT	4.00E-03	1.77E-03	2.48E-04	1.11E-04	7.35E-04	7.27E-04

11	WET	2.61E-03	3.95E-03	2.42E-03	1.62E-03	8.36E-03	1.24E-02
	BAS	1.15E-02	1.33E-03	1.69E-04	-6.64E-05	-7.27E-03	-1.05E-03
	TOT	1.41E-02	5.29E-03	2.59E-03	1.55E-03	1.09E-03	1.13E-02
12	WET	1.95E-03	1.31E-03	8.76E-04	1.26E-03	5.85E-04	-1.40E-03
	BAS	2.05E-03	4.61E-04	6.60E-05	1.34E-05	1.50E-04	2.75E-04
	TOT	4.00E-03	1.77E-03	9.42E-04	1.27E-03	7.35E-04	-1.13E-03
13	WET	1.39E-02	6.28E-03	2.90E-03	-1.49E-03	1.43E-02	-1.12E-02
	BAS	2.05E-03	1.62E-03	1.39E-04	-3.67E-05	4.82E-03	-5.58E-03
	TOT	1.59E-02	7.90E-03	3.04E-03	-1.52E-03	1.91E-02	-1.67E-02
14	WET	3.90E-03	2.62E-03	4.79E-04	8.55E-04	1.17E-03	1.29E-04
	BAS	4.10E-03	9.22E-04	1.32E-04	2.68E-05	3.00E-04	5.51E-04
	TOT	8.00E-03	3.54E-03	6.11E-04	8.82E-04	1.47E-03	6.79E-04
15	WET	3.90E-03	2.62E-03	7.11E-04	6.24E-04	1.17E-03	1.29E-04
	BAS	4.10E-03	9.22E-04	1.32E-04	2.68E-05	3.00E-04	5.51E-04
	TOT	8.00E-03	3.54E-03	8.43E-04	6.51E-04	1.47E-03	6.79E-04
16	WET	3.90E-03	2.62E-03	3.64E-04	9.71E-04	1.17E-03	1.29E-04
	BAS	4.10E-03	9.22E-04	1.32E-04	2.68E-05	3.00E-04	5.51E-04
	TOT	8.00E-03	3.54E-03	4.96E-04	9.98E-04	1.47E-03	6.79E-04
17	WET	9.76E-03	6.54E-03	9.09E-04	4.90E-04	2.92E-03	2.26E-03
	BAS	1.02E-02	2.30E-03	3.30E-04	6.70E-05	7.50E-04	1.38E-03
	TOT	2.00E-02	8.85E-03	1.24E-03	5.57E-04	3.67E-03	3.64E-03
18	WET	3.90E-03	2.62E-03	3.64E-04	1.96E-04	1.17E-03	9.04E-04
	BAS	4.10E-03	9.22E-04	1.32E-04	2.68E-05	3.00E-04	5.51E-04
	TOT	8.00E-03	3.54E-03	4.96E-04	2.23E-04	1.47E-03	1.45E-03
19	WET	7.81E-03	5.92E-03	7.82E-04	3.82E-04	4.36E-03	4.52E-03
	BAS	8.19E-03	6.79E-04	1.91E-04	3.57E-05	-4.07E-03	5.76E-04
	TOT	1.60E-02	6.60E-03	9.73E-04	4.17E-04	2.93E-04	5.10E-03
20	WET	7.81E-03	5.23E-03	7.27E-04	3.92E-04	2.34E-03	1.81E-03
	BAS	8.19E-03	1.84E-03	2.64E-04	5.36E-05	6.00E-04	1.10E-03
	TOT	1.60E-02	7.08E-03	9.91E-04	4.46E-04	2.94E-03	2.91E-03
21	WET	7.81E-03	5.92E-03	7.82E-04	3.82E-04	4.36E-03	4.52E-03
	BAS	8.19E-03	6.79E-04	1.91E-04	3.57E-05	-4.07E-03	5.76E-04
	TOT	1.60E-02	6.60E-03	9.73E-04	4.17E-04	2.93E-04	5.10E-03
22	WET	1.95E-03	1.31E-03	1.82E-04	9.80E-05	5.85E-04	4.52E-04
	BAS	2.05E-03	4.61E-04	6.60E-05	1.34E-05	1.50E-04	2.75E-04
	TOT	4.00E-03	1.77E-03	2.48E-04	1.11E-04	7.35E-04	7.27E-04
23	WET	1.95E-03	1.31E-03	1.82E-04	9.80E-05	5.85E-04	4.52E-04
	BAS	2.05E-03	4.61E-04	6.60E-05	1.34E-05	1.50E-04	2.75E-04
	TOT	4.00E-03	1.77E-03	2.48E-04	1.11E-04	7.35E-04	7.27E-04
24	WET	9.76E-03	6.54E-03	9.09E-04	4.90E-04	2.92E-03	2.26E-03
	BAS	1.02E-02	2.30E-03	3.30E-04	6.70E-05	7.50E-04	1.38E-03
	TOT	2.00E-02	8.85E-03	1.24E-03	5.57E-04	3.67E-03	3.64E-03

25	WET	3.90E-03	2.62E-03	3.64E-04	1.96E-04	1.17E-03	9.04E-04
	BAS	4.10E-03	9.22E-04	1.32E-04	2.68E-05	3.00E-04	5.51E-04
	TOT	8.00E-03	3.54E-03	4.96E-04	2.23E-04	1.47E-03	1.45E-03
26	WET	1.54E-02	6.54E-03	9.09E-04	4.90E-04	-2.72E-03	2.26E-03
	BAS	1.02E-02	2.30E-03	3.30E-04	6.70E-05	7.50E-04	1.38E-03
	TOT	2.56E-02	8.85E-03	1.24E-03	5.57E-04	-1.97E-03	3.64E-03
27	WET	3.90E-02	2.62E-02	5.92E-03	-5.92E-03	6.79E-02	2.55E-02
	BAS	4.10E-02	9.22E-03	1.32E-03	2.68E-04	3.00E-03	5.51E-03
	TOT	8.00E-02	3.54E-02	7.24E-03	-5.65E-03	7.09E-02	3.10E-02
28	WET	9.76E-03	6.54E-03	9.09E-04	4.90E-04	2.92E-03	2.26E-03
	BAS	1.02E-02	2.30E-03	3.30E-04	6.70E-05	7.50E-04	1.38E-03
	TOT	2.00E-02	8.85E-03	1.24E-03	5.57E-04	3.67E-03	3.64E-03
29	WET	1.95E-03	1.31E-03	4.13E-04	-1.33E-04	5.85E-04	4.52E-04
	BAS	2.05E-03	4.61E-04	6.60E-05	1.34E-05	1.50E-04	2.75E-04
	TOT	4.00E-03	1.77E-03	4.79E-04	-1.20E-04	7.35E-04	7.27E-04
30	WET	3.23E-02	6.54E-03	9.09E-04	4.90E-04	-1.97E-02	2.26E-03
	BAS	1.02E-02	2.30E-03	3.30E-04	6.70E-05	7.50E-04	1.38E-03
	TOT	4.26E-02	8.85E-03	1.24E-03	5.57E-04	-1.89E-02	3.64E-03
31	WET	9.76E-02	6.54E-02	9.09E-03	4.90E-03	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	1.24E-02	5.57E-03	3.67E-02	3.64E-02
32	WET	1.95E-01	1.31E-01	0.00E+00	0.00E+00	4.67E-01	6.03E-01
	BAS	2.05E-01	4.61E-02	8.97E-03	-1.03E-03	1.50E-02	2.75E-02
	TOT	4.00E-01	1.77E-01	8.97E-03	-1.03E-03	4.82E-01	6.31E-01
33	WET	3.90E-01	2.62E-01	3.64E-02	1.96E-02	1.17E-01	9.04E-02
	BAS	4.10E-01	9.22E-02	1.32E-02	2.68E-03	3.00E-02	5.51E-02
	TOT	8.00E-01	3.54E-01	4.96E-02	2.23E-02	1.47E-01	1.45E-01
34	WET	1.95E-01	1.31E-01	1.82E-02	9.80E-03	5.85E-02	4.52E-02
	BAS	2.05E-01	4.61E-02	6.60E-03	1.34E-03	1.50E-02	2.75E-02
	TOT	4.00E-01	1.77E-01	2.48E-02	1.11E-02	7.35E-02	7.27E-02
35	WET	1.95E-01	1.31E-01	1.82E-02	9.80E-03	5.85E-02	4.52E-02
	BAS	2.05E-01	4.61E-02	6.60E-03	1.34E-03	1.50E-02	2.75E-02
	TOT	4.00E-01	1.77E-01	2.48E-02	1.11E-02	7.35E-02	7.27E-02
36	WET	1.95E-01	1.31E-01	1.82E-02	9.80E-03	2.18E-01	-1.14E-01
	BAS	2.05E-01	4.61E-02	6.60E-03	1.34E-03	1.50E-02	2.75E-02
	TOT	4.00E-01	1.77E-01	2.48E-02	1.11E-02	2.33E-01	-8.63E-02
37	WET	9.76E-02	6.54E-02	9.09E-03	4.90E-03	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	1.24E-02	5.57E-03	3.67E-02	3.64E-02
38	WET	1.95E-03	1.31E-03	1.82E-04	4.85E-04	5.85E-04	6.44E-05
	BAS	2.05E-03	4.61E-04	6.60E-05	1.34E-05	1.50E-04	2.75E-04
	TOT	4.00E-03	1.77E-03	2.48E-04	4.99E-04	7.35E-04	3.40E-04

39	WET	1.95E-01	1.31E-01	1.82E-02	9.80E-03	5.85E-02	4.52E-02
	BAS	2.05E-01	4.61E-02	6.60E-03	1.34E-03	1.50E-02	2.75E-02
	TOT	4.00E-01	1.77E-01	2.48E-02	1.11E-02	7.35E-02	7.27E-02
40	WET	9.76E-02	6.54E-02	9.09E-03	4.90E-03	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	1.24E-02	5.57E-03	3.67E-02	3.64E-02
41	WET	9.76E-02	6.54E-02	9.09E-03	4.90E-03	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	1.24E-02	5.57E-03	3.67E-02	3.64E-02
42	WET	9.76E-02	6.54E-02	9.09E-03	4.90E-03	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	1.24E-02	5.57E-03	3.67E-02	3.64E-02
43	WET	9.76E-02	6.54E-02	9.09E-03	4.90E-03	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	1.24E-02	5.57E-03	3.67E-02	3.64E-02
44	WET	9.76E-02	6.54E-02	3.97E-02	-2.58E-02	2.92E-02	2.26E-02
	BAS	1.02E-01	2.30E-02	3.30E-03	6.70E-04	7.50E-03	1.38E-02
	TOT	2.00E-01	8.85E-02	4.30E-02	-2.51E-02	3.67E-02	3.64E-02
45	WET	4.14E+03	1.66E+03	4.41E+02	7.81E+02	8.01E+02	3.32E+03
	BAS	1.77E+03	2.76E+02	9.26E+01	5.49E+01	8.97E+02	-1.53E+02
	TOT	5.91E+03	1.94E+03	5.33E+02	8.36E+02	1.70E+03	3.17E+03
46	WET	5.59E+02	3.91E+00	0.00E+00	2.23E+00	-5.62E+02	-3.49E+00
	BAS	2.29E+01	1.12E+01	4.91E+00	-4.50E+00	5.03E+01	4.69E+01
	TOT	5.82E+02	1.51E+01	4.91E+00	-2.28E+00	-5.12E+02	4.34E+01
48	WET	6.75E+01	4.20E+01	2.27E+00	1.17E+01	-5.16E+01	-3.71E+01
	BAS	1.17E+01	1.55E+00	8.82E+00	1.06E+01	3.02E-01	-2.05E+01
	TOT	7.92E+01	4.36E+01	1.11E+01	2.23E+01	-5.13E+01	-5.76E+01
49	WET	4.08E+02	1.79E+02	2.80E+01	3.87E+01	1.63E+02	3.30E+02
	BAS	3.99E+01	8.29E+00	1.28E+01	1.48E+01	7.69E+00	-2.35E+01
	TOT	4.48E+02	1.87E+02	4.08E+01	5.34E+01	1.70E+02	3.07E+02
50	WET	8.75E+05	6.69E+05	1.43E+04	2.80E+04	1.42E+05	1.46E+05
	BAS	7.37E+05	2.19E+05	6.12E+04	2.21E+04	-7.78E+03	2.60E+05
	TOT	1.61E+06	8.88E+05	7.55E+04	5.01E+04	1.35E+05	4.06E+05
51	WET	3.20E+05	1.32E+05	1.41E+04	7.12E+03	5.93E+04	-9.69E+04
	BAS	3.34E+04	1.02E+03	5.44E+02	2.18E+02	-7.30E+03	-1.16E+04
	TOT	3.53E+05	1.33E+05	1.46E+04	7.34E+03	5.20E+04	-1.08E+05

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
 SPRING RUNOFF SUBBASIN LOADINGS - March 10 to April 29, 1983

SUBBASIN	10	8	11	5-11	7-10-8	3-7-5
50	3.63E+07	1.38E+07	3.69E+06	1.14E+06	3.02E+06	1.90E+06
1	2.84E+01	8.90E+00	3.03E+00	2.74E+00	-5.23E+00	1.10E+01
2	2.99E+02	8.43E+01	4.09E+01	2.85E+01	1.34E+02	-2.69E+01
3	7.67E+02	2.27E+02	1.06E+02	4.95E+01	-4.43E+01	1.50E+02
5	4.64E+02	1.23E+02	4.93E+01	2.01E+01	-5.41E+01	3.48E+01
6	4.14E+02	2.23E+02	2.26E+02	1.25E+02	1.26E+02	3.67E+02
7	9.43E+02	3.85E+02	3.22E+02	1.64E+02	2.77E+02	3.42E+02
8	9.90E+13	4.81E+13	2.76E+13	2.65E+14	-2.97E+13	1.38E+14
9	1.68E+14	1.07E+14	2.02E+13	7.00E+13	-2.61E+13	-7.59E+13
46	2.03E+02	9.85E+01	8.34E+01	-4.99E+01	8.81E+01	1.09E+03
48	8.07E+02	5.03E+02	1.18E+02	5.41E+01	2.97E+02	2.05E+03
49	1.28E+04	3.34E+03	9.66E+02	1.18E+03	-2.66E+03	3.41E+03
50	1.38E+07	5.60E+06	3.33E+06	8.73E+05	2.36E+06	1.57E+06
51	9.95E+06	2.11E+06	4.86E+05	1.37E+05	-2.99E+06	1.37E+06
53	1.57E+05	9.06E+04	1.17E+04	1.28E+03	-1.18E+04	1.72E+04
54	5.89E+12	2.21E+12	1.76E+12	6.92E+12	2.81E+10	1.00E+12
55	2.99E+13	1.79E+13	5.71E+12	2.23E+13	-3.55E+12	6.16E+12

in m3 for parameter 52

kg for parameters 1-3, 5-7, 46, 48-51, and 53

total counts for parameters 8, 9, 54, and 55

Table N-4

Dry Event Fluxes Per Unit Area and Wet Event
Loadings Per Unit Area from Humber River Subbasins

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY

DRY EVENT 1 FLUX DIFFERENCES PER UNIT SUBBASIN AREA - October 5, 1982

In total counts/(s*km²) for parameters 8 and 9
 ks/(s*km²) for all other parameters

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
1	7.87E-10	1.20E-09	1.37E-08	-1.79E-08	-3.74E-10	-4.91E-09
2	3.93E-09	9.71E-09	3.55E-08	3.87E-07	2.75E-08	6.66E-08
3	2.08E-08	3.24E-08	1.07E-07	1.49E-07	-6.29E-08	8.64E-08
4	1.03E-10	1.38E-10	3.85E-10	1.18E-10	4.35E-10	2.10E-10
5	2.60E-09	3.69E-09	1.97E-08	8.93E-08	2.51E-07	-2.14E-07
6	9.13E-09	1.57E-08	8.36E-08	-2.87E-08	2.62E-08	-6.67E-08
7	4.02E-08	6.02E-09	1.59E-07	4.63E-07	-3.64E-07	-5.37E-08
8	1.43E+03	3.77E+03	1.02E+05	2.07E+05	3.68E+03	8.98E+04
9	9.06E+02	1.61E+03	1.94E+04	6.39E+03	2.02E+04	1.95E+04
10	2.60E-12	3.69E-12	8.66E-12	2.73E-12	1.10E-11	5.83E-12
11	1.46E-11	1.07E-11	2.21E-11	-1.46E-11	-1.23E-10	-4.30E-11
12	2.60E-12	3.69E-12	8.66E-12	2.73E-12	1.10E-11	5.83E-12
13	2.60E-12	1.30E-11	1.82E-11	-8.20E-12	1.10E-10	-2.09E-10
14	5.20E-12	7.38E-12	1.73E-11	5.46E-12	2.19E-11	1.17E-11
15	5.20E-12	7.38E-12	1.73E-11	5.46E-12	2.19E-11	1.17E-11
16	5.20E-12	7.38E-12	1.73E-11	5.46E-12	2.19E-11	1.17E-11
17	1.30E-11	1.84E-11	4.33E-11	1.37E-11	5.48E-11	2.91E-11
18	5.20E-12	7.38E-12	1.73E-11	5.46E-12	2.19E-11	1.17E-11
19	1.04E-11	5.44E-12	2.51E-11	7.23E-12	-5.48E-11	6.97E-12
20	1.04E-11	1.48E-11	3.46E-11	1.09E-11	4.39E-11	2.33E-11
21	1.04E-11	5.44E-12	2.51E-11	7.23E-12	-5.48E-11	6.97E-12
22	2.60E-12	3.69E-12	8.66E-12	2.73E-12	1.10E-11	5.83E-12
23	2.60E-12	3.69E-12	8.66E-12	2.73E-12	1.10E-11	5.83E-12
24	1.30E-11	1.84E-11	4.33E-11	1.37E-11	5.48E-11	2.91E-11
25	5.20E-12	7.38E-12	1.73E-11	5.46E-12	2.19E-11	1.17E-11
26	1.30E-11	1.84E-11	4.33E-11	1.37E-11	5.48E-11	2.91E-11
27	5.20E-11	7.38E-11	1.73E-10	5.46E-11	2.19E-10	1.17E-10
28	1.30E-11	1.84E-11	4.33E-11	1.37E-11	5.48E-11	2.91E-11
29	2.60E-12	3.69E-12	8.66E-12	2.73E-12	1.10E-11	5.83E-12
30	1.30E-11	1.84E-11	4.33E-11	1.37E-11	5.48E-11	2.91E-11
31	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
32	2.60E-10	3.69E-10	1.18E-09	-2.42E-10	1.10E-09	5.83E-10
33	5.20E-10	7.38E-10	1.73E-09	5.46E-10	2.19E-09	1.17E-09
34	2.60E-10	3.69E-10	8.66E-10	2.73E-10	1.10E-09	5.83E-10
35	2.60E-10	3.69E-10	8.66E-10	2.73E-10	1.10E-09	5.83E-10
36	2.60E-10	3.69E-10	8.66E-10	2.73E-10	1.10E-09	5.83E-10
37	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
38	2.60E-12	3.69E-12	8.66E-12	2.73E-12	1.10E-11	5.83E-12
39	2.60E-10	3.69E-10	8.66E-10	2.73E-10	1.10E-09	5.83E-10
40	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
41	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
42	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
43	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
44	1.30E-10	1.84E-10	4.33E-10	1.37E-10	5.48E-10	2.91E-10
45	2.24E-06	2.21E-06	1.21E-05	1.16E-05	3.11E-05	-1.51E-05
46	2.91E-08	8.97E-08	6.44E-07	-9.79E-07	1.25E-06	1.76E-06
48	1.48E-08	1.24E-08	1.16E-06	2.25E-06	6.68E-08	-2.26E-06
49	5.06E-08	6.64E-08	1.68E-06	3.14E-06	3.46E-07	-2.97E-06
50	9.35E-04	1.75E-03	8.02E-03	4.61E-03	1.46E-03	3.82E-03
51	4.24E-05	8.17E-06	7.14E-05	4.57E-05	4.27E-05	-4.69E-04

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
 DRY EVENT 2 FLUX DIFFERENCES PER UNIT SUBBASIN AREA - October 26, 1982

In total counts/(s*km2) for parameters 8 and 9
 kg/(s*km2) for all other parameters

PARAM\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
1	8.30E-10	2.06E-09	5.23E-09	-6.71E-09	-1.86E-09	-5.30E-09
2	4.15E-09	1.66E-08	1.35E-08	1.56E-07	1.66E-08	2.43E-07
3	2.19E-08	5.56E-08	4.08E-08	6.30E-08	-1.15E-07	1.93E-07
4	1.09E-10	2.36E-10	1.47E-10	5.94E-11	3.97E-10	3.00E-10
5	2.74E-09	6.32E-09	7.51E-09	3.63E-08	3.01E-07	-2.26E-07
6	9.63E-09	2.70E-08	3.19E-08	-8.84E-09	1.09E-08	-5.50E-08
7	4.24E-08	1.03E-08	6.07E-08	1.90E-07	-3.67E-07	2.07E-07
8	1.50E+03	6.46E+03	3.87E+04	8.61E+04	-2.29E+03	2.50E+05
9	9.56E+02	2.76E+03	7.39E+03	3.17E+03	2.23E+04	3.40E+04
10	2.74E-12	6.32E-12	3.30E-12	1.37E-12	9.44E-12	7.29E-12
11	1.54E-11	1.83E-11	8.42E-12	-5.16E-12	-1.45E-10	-5.38E-11
12	2.74E-12	6.32E-12	3.30E-12	1.37E-12	9.44E-12	7.29E-12
13	2.74E-12	2.23E-11	6.94E-12	-2.71E-12	1.05E-10	-2.51E-10
14	5.48E-12	1.26E-11	6.60E-12	2.73E-12	1.89E-11	1.46E-11
15	5.48E-12	1.26E-11	6.60E-12	2.73E-12	1.89E-11	1.46E-11
16	5.48E-12	1.26E-11	6.60E-12	2.73E-12	1.89E-11	1.46E-11
17	1.37E-11	3.16E-11	1.65E-11	6.83E-12	4.72E-11	3.64E-11
18	5.48E-12	1.26E-11	6.60E-12	2.73E-12	1.89E-11	1.46E-11
19	1.10E-11	9.32E-12	9.56E-12	3.68E-12	-5.74E-11	1.63E-11
20	1.10E-11	2.53E-11	1.32E-11	5.46E-12	3.77E-11	2.91E-11
21	1.10E-11	9.32E-12	9.56E-12	3.68E-12	-5.74E-11	1.63E-11
22	2.74E-12	6.32E-12	3.30E-12	1.37E-12	9.44E-12	7.29E-12
23	2.74E-12	6.32E-12	3.30E-12	1.37E-12	9.44E-12	7.29E-12
24	1.37E-11	3.16E-11	1.65E-11	6.83E-12	4.72E-11	3.64E-11
25	5.48E-12	1.26E-11	6.60E-12	2.73E-12	1.89E-11	1.46E-11
26	1.37E-11	3.16E-11	1.65E-11	6.83E-12	4.72E-11	3.64E-11
27	5.48E-11	1.26E-10	6.60E-11	2.73E-11	1.89E-10	1.46E-10
28	1.37E-11	3.16E-11	1.65E-11	6.83E-12	4.72E-11	3.64E-11
29	2.74E-12	6.32E-12	3.30E-12	1.37E-12	9.44E-12	7.29E-12
30	1.37E-11	3.16E-11	1.65E-11	6.83E-12	4.72E-11	3.64E-11
31	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
32	2.74E-10	6.32E-10	4.48E-10	-5.95E-11	9.44E-10	7.29E-10
33	5.48E-10	1.26E-09	6.60E-10	2.73E-10	1.89E-09	1.46E-09
34	2.74E-10	6.32E-10	3.30E-10	1.37E-10	9.44E-10	7.29E-10
35	2.74E-10	6.32E-10	3.30E-10	1.37E-10	9.44E-10	7.29E-10
36	2.74E-10	6.32E-10	3.30E-10	1.37E-10	9.44E-10	7.29E-10
37	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
38	2.74E-12	6.32E-12	3.30E-12	1.37E-12	9.44E-12	7.29E-12
39	2.74E-10	6.32E-10	3.30E-10	1.37E-10	9.44E-10	7.29E-10
40	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
41	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
42	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
43	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
44	1.37E-10	3.16E-10	1.65E-10	6.83E-11	4.72E-10	3.64E-10
45	2.37E-06	3.79E-06	4.63E-06	5.01E-06	3.70E-05	-1.16E-05
46	3.07E-08	1.54E-07	2.45E-07	-3.71E-07	1.35E-06	1.86E-06
48	1.56E-08	2.13E-08	4.41E-07	9.38E-07	8.18E-08	-9.57E-07
49	5.34E-08	1.14E-07	6.40E-07	1.31E-06	3.59E-07	-1.18E-06
50	9.86E-04	3.01E-03	3.06E-03	2.10E-03	-7.57E-04	9.32E-03
51	4.47E-05	1.40E-05	2.72E-05	2.05E-05	1.27E-04	-5.38E-04

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 1 LOADING DIFFERENCES PER UNIT SUBBASIN AREA
October 20, 1982

In m3/km2 for parameter 52
total counts/km2 for parameters 8 and 9
kg/km2 for all other parameters

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
52 WET	1.61E+00	3.73E+01	6.74E+02	2.12E+03	4.89E+02	-7.87E+02
BAS	1.47E+02	3.45E+02	2.84E+02	4.18E+02	3.26E+03	3.20E+03
TOT	1.49E+02	3.82E+02	9.58E+02	2.53E+03	3.75E+03	2.41E+03
1 WET	0.00E+00	0.00E+00	4.85E-04	5.85E-03	1.67E-05	5.44E-03
BAS	4.46E-05	1.12E-04	4.51E-04	-1.15E-03	6.02E-04	-2.11E-05
TOT	4.46E-05	1.12E-04	9.36E-04	4.70E-03	6.19E-04	5.42E-03
2 WET	5.31E-05	3.35E-04	7.90E-03	1.05E-01	1.44E-03	-7.71E-02
BAS	2.23E-04	9.07E-04	1.17E-03	3.25E-02	6.34E-03	2.47E-02
TOT	2.76E-04	1.24E-03	9.07E-03	1.37E-01	7.77E-03	-5.24E-02
3 WET	6.42E-06	7.61E-04	2.69E-02	1.65E-01	2.06E-02	-7.23E-02
BAS	1.18E-03	3.03E-03	3.52E-03	1.46E-02	1.04E-02	3.20E-02
TOT	1.18E-03	3.79E-03	3.04E-02	1.80E-01	3.09E-02	-4.03E-02
4 WET	0.00E+00	0.00E+00	1.42E-04	4.68E-04	0.00E+00	-5.16E-04
BAS	5.85E-06	1.29E-05	1.26E-05	1.83E-05	1.29E-04	1.25E-04
TOT	5.85E-06	1.29E-05	1.55E-04	4.86E-04	1.29E-04	-3.91E-04
5 WET	1.61E-06	3.53E-04	8.38E-03	4.45E-02	-1.91E-03	-3.95E-02
BAS	1.47E-04	3.45E-04	6.47E-04	7.74E-03	2.86E-02	-1.62E-02
TOT	1.49E-04	6.98E-04	9.02E-03	5.23E-02	2.66E-02	-5.57E-02
6 WET	1.96E-05	4.21E-03	1.04E-01	4.64E-01	1.57E-02	-3.08E-01
BAS	5.17E-04	1.47E-03	2.74E-03	-4.62E-04	1.03E-02	1.05E-03
TOT	5.37E-04	5.68E-03	1.06E-01	4.64E-01	2.60E-02	-3.07E-01
7 WET	2.14E-03	4.94E-03	1.74E-01	6.09E-01	3.07E-02	-5.07E-01
BAS	2.28E-03	5.63E-04	5.23E-03	4.14E-02	-9.07E-03	1.93E-02
TOT	4.42E-03	5.51E-03	1.79E-01	6.51E-01	2.16E-02	-4.88E-01
8 WET	1.48E+09	9.76E+09	2.71E+10	1.72E+13	7.53E+10	-9.40E+12
BAS	8.08E+07	3.52E+08	3.33E+09	1.92E+10	1.65E+09	2.32E+10
TOT	1.56E+09	1.01E+10	3.04E+10	1.72E+13	7.69E+10	-9.38E+12
9 WET	3.86E+09	2.00E+10	1.04E+11	1.23E+13	-9.07E+09	-6.75E+12
BAS	5.13E+07	1.51E+08	6.37E+08	9.59E+08	2.88E+09	4.83E+09
TOT	3.92E+09	2.02E+10	1.04E+11	1.23E+13	-6.19E+09	-6.75E+12
10 WET	1.61E-09	3.73E-08	6.74E-07	2.12E-06	4.89E-07	-7.87E-07
BAS	1.47E-07	3.45E-07	2.84E-07	4.18E-07	3.26E-06	3.20E-06
TOT	1.49E-07	3.82E-07	9.58E-07	2.53E-06	3.75E-06	2.41E-06

11	WET	0.00E+00	4.51E-07	9.86E-06	9.39E-06	2.72E-06	2.41E-06
	BAS	8.28E-07	9.98E-07	7.25E-07	-6.99E-07	-1.79E-06	-1.01E-06
	TOT	8.28E-07	1.45E-06	1.06E-05	8.69E-06	9.34E-07	1.40E-06
12	WET	1.61E-09	3.73E-08	6.20E-06	2.22E-05	4.89E-07	-2.18E-05
	BAS	1.47E-07	3.45E-07	2.84E-07	4.18E-07	3.26E-06	3.20E-06
	TOT	1.49E-07	3.82E-07	6.49E-06	2.26E-05	3.75E-06	-1.86E-05
13	WET	1.61E-09	0.00E+00	5.26E-06	7.88E-06	-2.22E-08	-1.13E-05
	BAS	1.47E-07	1.22E-06	5.98E-07	-2.60E-07	1.42E-05	-2.08E-05
	TOT	1.49E-07	1.22E-06	5.85E-06	7.62E-06	1.42E-05	-3.21E-05
14	WET	3.22E-09	7.45E-08	1.35E-06	8.23E-05	9.78E-07	-4.37E-05
	BAS	2.94E-07	6.89E-07	5.69E-07	8.36E-07	6.52E-06	6.39E-06
	TOT	2.98E-07	7.64E-07	1.92E-06	8.31E-05	7.49E-06	-3.73E-05
15	WET	3.22E-09	7.45E-08	1.35E-06	5.63E-05	9.78E-07	-2.96E-05
	BAS	2.94E-07	6.89E-07	5.69E-07	8.36E-07	6.52E-06	6.39E-06
	TOT	2.98E-07	7.64E-07	1.92E-06	5.71E-05	7.49E-06	-2.33E-05
16	WET	3.22E-09	7.45E-08	1.35E-06	4.23E-06	9.78E-07	-1.57E-06
	BAS	2.94E-07	6.89E-07	5.69E-07	8.36E-07	6.52E-06	6.39E-06
	TOT	2.98E-07	7.64E-07	1.92E-06	5.07E-06	7.49E-06	4.82E-06
17	WET	8.05E-09	1.86E-07	2.70E-06	1.29E-05	2.44E-06	-3.93E-06
	BAS	7.36E-07	1.72E-06	1.42E-06	2.09E-06	1.63E-05	1.60E-05
	TOT	7.44E-07	1.91E-06	4.12E-06	1.50E-05	1.87E-05	1.20E-05
18	WET	3.22E-09	7.45E-08	1.35E-06	4.23E-06	9.78E-07	-1.57E-06
	BAS	2.94E-07	6.89E-07	5.69E-07	8.36E-07	6.52E-06	6.39E-06
	TOT	2.98E-07	7.64E-07	1.92E-06	5.07E-06	7.49E-06	4.82E-06
19	WET	6.44E-09	5.58E-07	2.92E-06	8.43E-06	8.56E-06	2.88E-06
	BAS	5.89E-07	5.08E-07	8.24E-07	1.16E-06	2.04E-06	5.78E-06
	TOT	5.95E-07	1.07E-06	3.75E-06	9.58E-06	1.06E-05	8.66E-06
20	WET	6.44E-09	1.49E-07	2.70E-06	8.46E-06	1.96E-06	-3.15E-06
	BAS	5.89E-07	1.38E-06	1.14E-06	1.67E-06	1.30E-05	1.28E-05
	TOT	5.95E-07	1.53E-06	3.83E-06	1.01E-05	1.50E-05	9.63E-06
21	WET	6.44E-09	5.58E-07	2.92E-06	8.43E-06	8.56E-06	2.88E-06
	BAS	5.89E-07	5.08E-07	8.24E-07	1.16E-06	2.04E-06	5.78E-06
	TOT	5.95E-07	1.07E-06	3.75E-06	9.58E-06	1.06E-05	8.66E-06
22	WET	1.61E-09	3.73E-08	6.74E-07	2.12E-06	4.89E-07	-7.87E-07
	BAS	1.47E-07	3.45E-07	2.84E-07	4.18E-07	3.26E-06	3.20E-06
	TOT	1.49E-07	3.82E-07	9.58E-07	2.53E-06	3.75E-06	2.41E-06
23	WET	1.61E-09	3.73E-08	6.74E-07	2.12E-06	4.89E-07	-7.87E-07
	BAS	1.47E-07	3.45E-07	2.84E-07	4.18E-07	3.26E-06	3.20E-06
	TOT	1.49E-07	3.82E-07	9.58E-07	2.53E-06	3.75E-06	2.41E-06
24	WET	8.05E-09	1.86E-07	3.37E-06	1.06E-05	2.44E-06	-3.93E-06
	BAS	7.36E-07	1.72E-06	1.42E-06	2.09E-06	1.63E-05	1.60E-05
	TOT	7.44E-07	1.91E-06	4.79E-06	1.27E-05	1.87E-05	1.20E-05

25	WET	3.22E-09	7.45E-08	1.35E-06	4.23E-06	9.78E-07	-1.57E-06
	BAS	2.94E-07	6.89E-07	5.69E-07	8.36E-07	6.52E-06	6.39E-06
	TOT	2.98E-07	7.64E-07	1.92E-06	5.07E-06	7.49E-06	4.82E-06
26	WET	8.05E-09	1.86E-07	3.37E-06	1.06E-05	2.44E-06	-3.93E-06
	BAS	7.36E-07	1.72E-06	1.42E-06	2.09E-06	1.63E-05	1.60E-05
	TOT	7.44E-07	1.91E-06	4.79E-06	1.27E-05	1.87E-05	1.20E-05
27	WET	3.22E-08	7.45E-07	1.35E-05	-4.63E-05	9.78E-06	3.21E-05
	BAS	2.94E-06	6.89E-06	5.69E-06	8.36E-06	6.52E-05	6.39E-05
	TOT	2.98E-06	7.64E-06	1.92E-05	-3.80E-05	7.49E-05	9.60E-05
28	WET	8.05E-09	1.86E-07	3.37E-06	1.06E-05	2.44E-06	-3.93E-06
	BAS	7.36E-07	1.72E-06	1.42E-06	2.09E-06	1.63E-05	1.60E-05
	TOT	7.44E-07	1.91E-06	4.79E-06	1.27E-05	1.87E-05	1.20E-05
29	WET	1.61E-09	3.73E-08	6.74E-07	2.12E-06	4.89E-07	-7.87E-07
	BAS	1.47E-07	3.45E-07	2.84E-07	4.18E-07	3.26E-06	3.20E-06
	TOT	1.49E-07	3.82E-07	9.58E-07	2.53E-06	3.75E-06	2.41E-06
30	WET	8.05E-09	1.86E-07	3.37E-06	1.06E-05	2.44E-06	-3.93E-06
	BAS	7.36E-07	1.72E-06	1.42E-06	2.09E-06	1.63E-05	1.60E-05
	TOT	7.44E-07	1.91E-06	4.79E-06	1.27E-05	1.87E-05	1.20E-05
31	WET	8.05E-08	1.86E-06	3.37E-05	1.06E-04	2.44E-05	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	1.91E-05	4.79E-05	1.27E-04	1.87E-04	1.20E-04
32	WET	1.61E-07	3.22E-05	2.02E-04	-2.52E-04	2.17E-04	-5.66E-04
	BAS	1.47E-05	3.45E-05	3.86E-05	6.75E-06	3.26E-04	3.20E-04
	TOT	1.49E-05	6.67E-05	2.41E-04	-2.45E-04	5.43E-04	-2.47E-04
33	WET	3.22E-07	7.45E-06	1.35E-04	4.23E-04	9.78E-05	-1.57E-04
	BAS	2.94E-05	6.89E-05	5.69E-05	8.36E-05	6.52E-04	6.39E-04
	TOT	2.98E-05	7.64E-05	1.92E-04	5.07E-04	7.49E-04	4.82E-04
34	WET	1.61E-07	1.84E-05	6.74E-05	2.12E-04	-2.97E-05	-7.87E-05
	BAS	1.47E-05	3.45E-05	2.84E-05	4.18E-05	3.26E-04	3.20E-04
	TOT	1.49E-05	5.29E-05	9.58E-05	2.53E-04	2.96E-04	2.41E-04
35	WET	1.61E-07	3.73E-06	6.74E-05	2.12E-04	4.89E-05	-7.87E-05
	BAS	1.47E-05	3.45E-05	2.84E-05	4.18E-05	3.26E-04	3.20E-04
	TOT	1.49E-05	3.82E-05	9.58E-05	2.53E-04	3.75E-04	2.41E-04
36	WET	1.61E-07	3.73E-06	6.74E-05	2.12E-04	4.89E-05	-7.87E-05
	BAS	1.47E-05	3.45E-05	2.84E-05	4.18E-05	3.26E-04	3.20E-04
	TOT	1.49E-05	3.82E-05	9.58E-05	2.53E-04	3.75E-04	2.41E-04
37	WET	8.05E-08	1.86E-06	3.37E-05	1.06E-04	2.44E-05	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	1.91E-05	4.79E-05	1.27E-04	1.87E-04	1.20E-04
38	WET	1.61E-09	3.44E-07	3.36E-06	-7.13E-06	-1.15E-06	-7.87E-07
	BAS	1.47E-07	3.45E-07	2.84E-07	4.18E-07	3.26E-06	3.20E-06
	TOT	1.49E-07	6.89E-07	3.65E-06	-6.71E-06	2.11E-06	2.41E-06

39	WET	1.61E-07	3.73E-06	6.74E-05	2.12E-04	4.89E-05	-7.87E-05
	BAS	1.47E-05	3.45E-05	2.84E-05	4.18E-05	3.26E-04	3.20E-04
	TOT	1.49E-05	3.82E-05	9.58E-05	2.53E-04	3.75E-04	2.41E-04
40	WET	8.05E-08	1.86E-06	3.37E-05	1.06E-04	2.44E-05	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	1.91E-05	4.79E-05	1.27E-04	1.87E-04	1.20E-04
41	WET	8.05E-08	1.86E-06	3.37E-05	1.06E-04	2.44E-05	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	1.91E-05	4.79E-05	1.27E-04	1.87E-04	1.20E-04
42	WET	8.05E-08	1.86E-06	3.37E-05	1.06E-04	2.44E-05	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	1.91E-05	4.79E-05	1.27E-04	1.87E-04	1.20E-04
43	WET	8.05E-08	1.86E-06	3.37E-05	1.06E-04	2.44E-05	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	1.91E-05	4.79E-05	1.27E-04	1.87E-04	1.20E-04
44	WET	8.05E-08	4.62E-06	3.37E-05	1.06E-04	9.70E-06	-3.93E-05
	BAS	7.36E-06	1.72E-05	1.42E-05	2.09E-05	1.63E-04	1.60E-04
	TOT	7.44E-06	2.19E-05	4.79E-05	1.27E-04	1.73E-04	1.20E-04
45	WET	0.00E+00	7.89E-01	6.97E+00	6.32E+01	-2.51E+00	-4.56E+01
	BAS	1.27E-01	2.07E-01	3.99E-01	1.22E+00	5.03E+00	1.02E+00
	TOT	1.27E-01	9.96E-01	7.37E+00	6.45E+01	2.52E+00	-4.46E+01
46	WET	2.95E-03	7.97E-04	1.23E-01	3.68E+00	-4.49E-02	-2.10E+00
	BAS	1.65E-03	8.38E-03	2.12E-02	-6.55E-02	1.59E-01	2.99E-01
	TOT	4.60E-03	9.18E-03	1.44E-01	3.61E+00	1.14E-01	-1.80E+00
48	WET	0.00E+00	1.48E-03	5.23E-02	8.78E-01	2.95E-02	-6.27E-01
	BAS	8.38E-04	1.16E-03	3.80E-02	2.10E-01	1.85E-02	-1.78E-01
	TOT	8.38E-04	2.64E-03	9.03E-02	1.09E+00	4.79E-02	-8.05E-01
49	WET	3.68E-04	7.66E-03	3.54E-01	4.55E+00	3.17E-02	-3.19E+00
	BAS	2.86E-03	6.21E-03	5.52E-02	2.95E-01	7.71E-02	-1.95E-01
	TOT	3.23E-03	1.39E-02	4.09E-01	4.85E+00	1.09E-01	-3.39E+00
50	WET	9.41E-02	2.51E+00	2.01E+02	1.48E+03	2.42E+02	-1.10E+03
	BAS	5.30E+01	1.64E+02	2.63E+02	5.57E+02	9.36E+02	1.69E+03
	TOT	5.30E+01	1.66E+02	4.64E+02	2.03E+03	1.18E+03	5.90E+02
51	WET	0.00E+00	2.09E+00	1.45E+02	6.23E+02	1.85E+01	-5.94E+02
	BAS	2.40E+00	7.64E-01	2.34E+00	5.34E+00	3.55E+01	-3.78E+01
	TOT	2.40E+00	2.85E+00	1.48E+02	6.28E+02	5.40E+01	-6.31E+02

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 2 LOADING DIFFERENCES PER UNIT SUBBASIN AREA
November 3-5, 1982

In m3/km2 for parameter 52
total counts/km2 for parameters 8 and 9
kg/km2 for all other parameters

PARAM\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
52 WET	8.02E+03	1.49E+04	2.03E+04	3.36E+04	4.38E+04	2.80E+04
BAS	3.12E+03	4.28E+03	7.42E+03	5.26E+03	6.38E+03	2.13E+03
TOT	1.11E+04	1.91E+04	2.77E+04	3.89E+04	5.02E+04	3.02E+04
1 WET	2.50E-03	4.23E-03	3.92E-03	4.07E-02	5.03E-02	4.08E-02
BAS	9.45E-04	1.40E-03	1.18E-02	-3.16E-02	-2.06E-03	-7.04E-03
TOT	3.44E-03	5.62E-03	1.57E-02	9.06E-03	4.82E-02	3.38E-02
2 WET	7.84E-02	1.20E-01	2.00E-01	6.78E-02	1.31E+00	-3.66E-01
BAS	4.73E-03	1.13E-02	3.04E-02	6.99E-01	1.93E-02	-7.86E-02
TOT	8.31E-02	1.31E-01	2.30E-01	7.67E-01	1.33E+00	-4.45E-01
3 WET	1.36E-01	2.11E-01	3.48E-01	3.90E-01	1.74E+00	8.51E+00
BAS	2.50E-02	3.76E-02	9.18E-02	2.73E-01	-1.12E-01	-7.45E-03
TOT	1.61E-01	2.49E-01	4.40E-01	6.63E-01	1.62E+00	8.50E+00
4 WET	2.27E-04	6.00E-04	1.26E-03	3.47E-04	3.05E-03	8.21E-04
BAS	1.24E-04	1.60E-04	3.30E-04	2.28E-04	2.57E-04	3.08E-05
TOT	3.51E-04	7.60E-04	1.59E-03	5.75E-04	3.31E-03	8.51E-04
5 WET	5.79E-02	9.72E-02	1.43E-01	1.78E-01	8.11E-01	2.48E-02
BAS	3.12E-03	4.28E-03	1.69E-02	1.62E-01	2.63E-01	-2.84E-01
TOT	6.10E-02	1.02E-01	1.60E-01	3.39E-01	1.07E+00	-2.59E-01
6 WET	1.05E-01	2.18E-01	1.10E+00	1.75E+00	1.25E+00	2.21E+00
BAS	1.10E-02	1.83E-02	7.16E-02	-4.84E-02	7.87E-03	-1.11E-01
TOT	1.16E-01	2.36E-01	1.17E+00	1.70E+00	1.26E+00	2.10E+00
7 WET	2.45E-01	5.84E-01	1.62E+00	9.96E-01	5.55E+00	-4.44E-01
BAS	4.83E-02	6.99E-03	1.37E-01	8.40E-01	-4.46E-01	-3.15E-01
TOT	2.93E-01	5.91E-01	1.75E+00	1.84E+00	5.11E+00	-7.59E-01
8 WET	3.33E+10	8.84E+10	7.95E+10	1.13E+12	3.58E+11	4.69E+12
BAS	1.71E+09	4.37E+09	8.70E+10	3.78E+11	1.20E+08	-2.87E+10
TOT	3.50E+10	9.28E+10	1.67E+11	1.51E+12	3.58E+11	4.66E+12
9 WET	6.99E+10	1.02E+11	3.20E+11	2.77E+12	3.57E+12	5.55E+12
BAS	1.09E+09	1.87E+09	1.66E+10	1.23E+10	1.95E+10	9.77E+09
TOT	7.10E+10	1.04E+11	3.36E+11	2.78E+12	3.59E+12	5.56E+12
10 WET	8.02E-06	1.49E-05	2.03E-05	3.36E-05	4.38E-05	2.80E-05
BAS	3.12E-06	4.28E-06	7.42E-06	5.26E-06	6.38E-06	2.13E-06
TOT	1.11E-05	1.91E-05	2.77E-05	3.89E-05	5.02E-05	3.02E-05

11	WET	1.33E-05	1.05E-04	1.93E-04	7.48E-04	1.30E-03	-9.22E-04
	BAS	1.76E-05	1.24E-05	1.89E-05	-2.55E-05	-1.57E-04	-5.45E-05
	TOT	3.09E-05	1.17E-04	2.12E-04	7.22E-04	1.14E-03	-9.76E-04
12	WET	8.02E-06	1.49E-05	2.03E-05	4.43E-04	5.60E-04	-3.13E-04
	BAS	3.12E-06	4.28E-06	7.42E-06	5.26E-06	6.38E-06	2.13E-06
	TOT	1.11E-05	1.91E-05	2.77E-05	4.48E-04	5.66E-04	-3.10E-04
13	WET	2.80E-05	4.25E-05	2.51E-04	-3.05E-04	7.78E-04	-9.70E-04
	BAS	3.12E-06	1.51E-05	1.56E-05	-1.41E-05	1.07E-04	-2.44E-04
	TOT	3.11E-05	5.76E-05	2.67E-04	-3.19E-04	8.85E-04	-1.21E-03
14	WET	1.60E-05	2.97E-05	4.05E-05	6.73E-05	8.76E-05	5.61E-05
	BAS	6.25E-06	8.57E-06	1.48E-05	1.05E-05	1.28E-05	4.27E-06
	TOT	2.23E-05	3.83E-05	5.54E-05	7.78E-05	1.00E-04	6.03E-05
15	WET	1.60E-05	2.97E-05	6.11E-05	-3.45E-06	8.76E-05	5.61E-05
	BAS	6.25E-06	8.57E-06	1.48E-05	1.05E-05	1.28E-05	4.27E-06
	TOT	2.23E-05	3.83E-05	7.59E-05	7.08E-06	1.00E-04	6.03E-05
16	WET	1.60E-05	2.97E-05	4.05E-05	6.73E-05	8.76E-05	5.61E-05
	BAS	6.25E-06	8.57E-06	1.48E-05	1.05E-05	1.28E-05	4.27E-06
	TOT	2.23E-05	3.83E-05	5.54E-05	7.78E-05	1.00E-04	6.03E-05
17	WET	4.01E-05	7.43E-05	1.01E-04	1.68E-04	2.19E-04	1.40E-04
	BAS	1.56E-05	2.14E-05	3.71E-05	2.63E-05	3.19E-05	1.07E-05
	TOT	5.57E-05	9.57E-05	1.38E-04	1.94E-04	2.51E-04	1.51E-04
18	WET	1.60E-05	2.97E-05	4.05E-05	6.73E-05	8.76E-05	5.61E-05
	BAS	6.25E-06	8.57E-06	1.48E-05	1.05E-05	1.28E-05	4.27E-06
	TOT	2.23E-05	3.83E-05	5.54E-05	7.78E-05	1.00E-04	6.03E-05
19	WET	3.21E-05	6.42E-05	8.43E-05	1.37E-04	2.14E-04	1.57E-04
	BAS	1.25E-05	6.31E-06	2.15E-05	1.40E-05	-7.53E-05	-6.62E-06
	TOT	4.46E-05	7.05E-05	1.06E-04	1.51E-04	1.38E-04	1.50E-04
20	WET	3.21E-05	5.95E-05	8.10E-05	1.35E-04	1.75E-04	1.12E-04
	BAS	1.25E-05	1.71E-05	2.97E-05	2.10E-05	2.55E-05	8.53E-06
	TOT	4.46E-05	7.66E-05	1.11E-04	1.56E-04	2.01E-04	1.21E-04
21	WET	3.21E-05	6.42E-05	8.43E-05	1.37E-04	2.14E-04	1.57E-04
	BAS	1.25E-05	6.31E-06	2.15E-05	1.40E-05	-7.53E-05	-6.62E-06
	TOT	4.46E-05	7.05E-05	1.06E-04	1.51E-04	1.38E-04	1.50E-04
22	WET	8.02E-06	1.49E-05	2.03E-05	3.36E-05	4.38E-05	2.80E-05
	BAS	3.12E-06	4.28E-06	7.42E-06	5.26E-06	6.38E-06	2.13E-06
	TOT	1.11E-05	1.91E-05	2.77E-05	3.89E-05	5.02E-05	3.02E-05
23	WET	8.02E-06	1.49E-05	2.03E-05	3.36E-05	4.38E-05	2.80E-05
	BAS	3.12E-06	4.28E-06	7.42E-06	5.26E-06	6.38E-06	2.13E-06
	TOT	1.11E-05	1.91E-05	2.77E-05	3.89E-05	5.02E-05	3.02E-05
24	WET	4.01E-05	7.43E-05	1.01E-04	1.68E-04	2.19E-04	1.40E-04
	BAS	1.56E-05	2.14E-05	3.71E-05	2.63E-05	3.19E-05	1.07E-05
	TOT	5.57E-05	9.57E-05	1.38E-04	1.94E-04	2.51E-04	1.51E-04

25	WET	1.60E-05	2.97E-05	4.05E-05	6.73E-05	8.76E-05	5.61E-05
	BAS	6.25E-06	8.57E-06	1.48E-05	1.05E-05	1.28E-05	4.27E-06
	TOT	2.23E-05	3.83E-05	5.54E-05	7.78E-05	1.00E-04	6.03E-05
26	WET	4.01E-05	7.43E-05	1.01E-04	1.68E-04	2.19E-04	1.40E-04
	BAS	1.56E-05	2.14E-05	3.71E-05	2.63E-05	3.19E-05	1.07E-05
	TOT	5.57E-05	9.57E-05	1.38E-04	1.94E-04	2.51E-04	1.51E-04
27	WET	1.60E-04	2.97E-04	4.05E-04	-1.39E-03	-3.80E-03	8.79E-03
	BAS	6.25E-05	8.57E-05	1.48E-04	1.05E-04	1.28E-04	4.27E-05
	TOT	2.23E-04	3.83E-04	5.54E-04	-1.29E-03	-3.67E-03	8.83E-03
28	WET	4.01E-05	7.43E-05	1.01E-04	1.68E-04	2.19E-04	1.40E-04
	BAS	1.56E-05	2.14E-05	3.71E-05	2.63E-05	3.19E-05	1.07E-05
	TOT	5.57E-05	9.57E-05	1.38E-04	1.94E-04	2.51E-04	1.51E-04
29	WET	8.02E-06	1.49E-05	2.03E-05	3.36E-05	4.38E-05	2.80E-05
	BAS	3.12E-06	4.28E-06	7.42E-06	5.26E-06	6.38E-06	2.13E-06
	TOT	1.11E-05	1.91E-05	2.77E-05	3.89E-05	5.02E-05	3.02E-05
30	WET	4.01E-05	7.43E-05	1.01E-04	1.68E-04	2.19E-04	1.40E-04
	BAS	1.56E-05	2.14E-05	3.71E-05	2.63E-05	3.19E-05	1.07E-05
	TOT	5.57E-05	9.57E-05	1.38E-04	1.94E-04	2.51E-04	1.51E-04
31	WET	4.01E-04	7.43E-04	1.01E-03	1.68E-03	2.19E-03	1.40E-03
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	1.94E-03	2.51E-03	1.51E-03
32	WET	8.02E-04	7.60E-03	7.64E-03	-1.59E-02	2.04E-02	-2.97E-02
	BAS	3.12E-04	4.28E-04	1.01E-03	-3.89E-04	6.38E-04	2.13E-04
	TOT	1.11E-03	8.03E-03	8.65E-03	-1.63E-02	2.10E-02	-2.95E-02
33	WET	1.60E-03	2.97E-03	4.05E-03	6.73E-03	8.76E-03	5.61E-03
	BAS	6.25E-04	8.57E-04	1.48E-03	1.05E-03	1.28E-03	4.27E-04
	TOT	2.23E-03	3.83E-03	5.54E-03	7.78E-03	1.00E-02	6.03E-03
34	WET	8.02E-04	1.49E-03	4.73E-03	-5.94E-03	4.38E-03	2.80E-03
	BAS	3.12E-04	4.28E-04	7.42E-04	5.26E-04	6.38E-04	2.13E-04
	TOT	1.11E-03	1.91E-03	5.48E-03	-5.41E-03	5.02E-03	3.02E-03
35	WET	8.02E-04	1.66E-03	2.28E-03	2.48E-03	3.42E-03	2.80E-03
	BAS	3.12E-04	4.28E-04	7.42E-04	5.26E-04	6.38E-04	2.13E-04
	TOT	1.11E-03	2.09E-03	3.03E-03	3.00E-03	4.06E-03	3.02E-03
36	WET	8.02E-04	1.49E-03	2.03E-03	3.36E-03	4.38E-03	2.80E-03
	BAS	3.12E-04	4.28E-04	7.42E-04	5.26E-04	6.38E-04	2.13E-04
	TOT	1.11E-03	1.91E-03	2.77E-03	3.89E-03	5.02E-03	3.02E-03
37	WET	4.01E-04	7.43E-04	1.01E-03	2.68E-03	2.19E-03	7.72E-03
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	2.94E-03	2.51E-03	7.82E-03
38	WET	8.02E-06	1.49E-05	3.05E-05	-1.72E-06	4.38E-05	2.80E-05
	BAS	3.12E-06	4.28E-06	7.42E-06	5.26E-06	6.38E-06	2.13E-06
	TOT	1.11E-05	1.91E-05	3.80E-05	3.54E-06	5.02E-05	3.02E-05

39	WET	8.02E-04	1.49E-03	2.03E-03	3.36E-03	4.38E-03	2.80E-03
	BAS	3.12E-01	4.28E-04	7.42E-04	5.26E-04	6.38E-04	2.13E-04
	TOT	1.11E-03	1.91E-03	2.77E-03	3.89E-03	5.02E-03	3.02E-03
40	WET	4.01E-04	7.43E-04	1.01E-03	1.68E-03	2.19E-03	1.40E-03
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	1.94E-03	2.51E-03	1.51E-03
41	WET	4.01E-04	7.43E-04	1.01E-03	1.68E-03	2.19E-03	1.40E-03
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	1.94E-03	2.51E-03	1.51E-03
42	WET	4.01E-04	7.43E-04	1.01E-03	1.68E-03	2.19E-03	1.40E-03
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	1.94E-03	2.51E-03	1.51E-03
43	WET	4.01E-04	7.43E-04	1.01E-03	1.68E-03	2.19E-03	1.40E-03
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	1.94E-03	2.51E-03	1.51E-03
44	WET	4.01E-04	7.43E-04	1.01E-03	4.08E-02	5.28E-03	-2.44E-02
	BAS	1.56E-04	2.14E-04	3.71E-04	2.63E-04	3.19E-04	1.07E-04
	TOT	5.57E-04	9.57E-04	1.38E-03	4.11E-02	5.60E-03	-2.43E-02
45	WET	1.28E+01	3.24E+01	4.54E+01	7.68E+01	1.46E+02	5.65E+01
	BAS	2.70E+00	2.57E+00	1.04E+01	2.13E+01	2.91E+01	-2.71E+01
	TOT	1.55E+01	3.50E+01	5.58E+01	9.81E+01	1.75E+02	2.94E+01
46	WET	3.27E-02	3.92E-02	2.03E-02	1.80E-01	3.54E-01	4.03E+00
	BAS	3.50E-02	1.04E-01	5.52E-01	-1.74E+00	1.26E+00	2.05E+00
	TOT	6.77E-02	1.43E-01	5.72E-01	-1.56E+00	1.61E+00	6.08E+00
48	WET	4.42E-01	1.02E+00	6.52E-01	-6.51E-03	1.58E+00	3.23E+00
	BAS	1.78E-02	1.44E-02	9.91E-01	4.11E+00	4.54E-02	-4.08E+00
	TOT	4.59E-01	1.03E+00	1.64E+00	4.10E+00	1.63E+00	-8.50E-01
49	WET	2.93E+00	4.11E+00	4.38E+00	1.34E+00	3.64E+01	2.26E+01
	BAS	6.08E-02	7.71E-02	1.44E+00	5.73E+00	2.69E-01	-5.51E+00
	TOT	2.99E+00	4.18E+00	5.82E+00	7.06E+00	3.67E+01	1.71E+01
50	WET	2.72E+03	4.81E+03	2.99E+03	8.53E+03	9.30E+03	2.70E+04
	BAS	1.12E+03	2.04E+03	6.87E+03	8.62E+03	-5.78E+02	-1.42E+03
	TOT	3.85E+03	6.85E+03	9.86E+03	1.71E+04	8.72E+03	2.56E+04
51	WET	2.20E+03	2.01E+03	2.08E+03	1.45E+03	3.96E+04	-1.17E+03
	BAS	5.09E+01	9.49E+00	6.11E+01	8.51E+01	-1.51E+01	-5.85E+02
	TOT	2.25E+03	2.02E+03	2.14E+03	1.54E+03	3.96E+04	-1.76E+03

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
WET EVENT 3 LOADING DIFFERENCES PER UNIT SUBBASIN AREA
November 21-22, 1982

In m3/km2 for parameter 52
total counts/km2 for parameters 8 and 9
kg/km2 for all other parameters

PARA\SUBBASIN	Upper Humber 10	West Humber 8	Upper Black Cr. 11	Lower Black Cr. 5-11	Mid Humber 7-10-8	Lower Humber 3-7-5
52 WET	3.42E+03	5.92E+03	3.61E+03	6.68E+03	1.41E+04	1.66E+04
BAS	3.59E+03	2.08E+03	1.31E+03	9.14E+02	3.62E+03	1.01E+04
TOT	7.01E+03	8.00E+03	4.92E+03	7.60E+03	1.78E+04	2.67E+04
1 WET	7.98E-04	1.32E-03	7.36E-04	1.46E-02	6.28E-03	-1.25E-02
BAS	1.09E-03	6.80E-04	2.08E-03	-5.59E-03	-2.24E-03	-3.59E-03
TOT	1.88E-03	1.99E-03	2.81E-03	8.96E-03	4.05E-03	-1.61E-02
2 WET	1.83E-02	2.84E-02	3.04E-02	-2.12E-02	2.83E-01	2.60E-01
BAS	5.43E-03	5.48E-03	5.38E-03	1.23E-01	2.43E-02	2.23E-01
TOT	2.38E-02	3.38E-02	3.58E-02	1.02E-01	3.07E-01	4.83E-01
3 WET	5.42E-02	9.96E-02	7.05E-02	2.72E-01	7.28E-01	6.87E-01
BAS	2.87E-02	1.83E-02	1.62E-02	4.79E-02	-1.08E-01	1.92E-01
TOT	8.29E-02	1.18E-01	8.67E-02	3.20E-01	6.20E-01	8.79E-01
4 WET	1.37E-04	2.40E-04	1.63E-04	3.24E-04	5.66E-04	6.16E-04
BAS	1.43E-04	7.78E-05	5.83E-05	3.96E-05	1.25E-04	4.10E-04
TOT	2.80E-04	3.18E-04	2.21E-04	3.64E-04	6.91E-04	1.03E-03
5 WET	4.62E-03	5.92E-03	3.22E-02	4.43E-02	1.39E+00	-1.65E+00
BAS	3.59E-03	2.08E-03	2.98E-03	2.84E-02	2.32E-01	-1.77E-01
TOT	8.21E-03	8.00E-03	3.52E-02	7.27E-02	1.63E+00	-1.83E+00
6 WET	2.83E-02	4.75E-02	3.55E-01	2.15E-01	5.65E-01	8.68E-01
BAS	1.26E-02	8.88E-03	1.26E-02	-8.64E-03	6.69E-03	-3.33E-02
TOT	4.09E-02	5.64E-02	3.68E-01	2.07E-01	5.72E-01	8.34E-01
7 WET	4.45E-02	9.32E-02	3.72E-01	6.08E-01	2.11E+00	2.40E+00
BAS	5.55E-02	3.40E-03	2.41E-02	1.48E-01	-5.55E-01	2.01E-01
TOT	1.00E-01	9.66E-02	3.96E-01	7.55E-01	1.55E+00	2.60E+00
8 WET	3.91E+10	7.02E+10	1.86E+11	1.10E+13	2.28E+11	-4.98E+12
BAS	1.97E+09	2.13E+09	1.54E+10	6.63E+10	3.33E+09	2.23E+11
TOT	4.11E+10	7.23E+10	2.02E+11	1.10E+13	2.31E+11	-4.75E+12
9 WET	1.30E+11	8.46E+10	2.76E+11	4.26E+12	-7.31E+11	-1.64E+12
BAS	1.25E+09	9.10E+08	2.94E+09	2.14E+09	1.74E+10	3.21E+10
TOT	1.31E+11	8.55E+10	2.79E+11	4.26E+12	-7.14E+11	-1.61E+12
10 WET	3.42E-06	5.92E-06	3.61E-06	6.68E-06	1.41E-05	1.66E-05
BAS	3.59E-06	2.08E-06	1.31E-06	9.14E-07	3.62E-06	1.01E-05
TOT	7.01E-06	8.00E-06	4.92E-06	7.60E-06	1.78E-05	2.67E-05

11	WET	4.57E-06	1.79E-05	4.80E-05	1.10E-04	2.02E-04	4.54E-04
	BAS	2.02E-05	6.03E-06	3.34E-06	-4.52E-06	-1.76E-04	-3.87E-05
	TOT	2.47E-05	2.39E-05	5.13E-05	1.06E-04	2.64E-05	4.16E-04
12	WET	3.42E-06	5.92E-06	1.74E-05	8.58E-05	1.41E-05	-5.16E-05
	BAS	3.59E-06	2.08E-06	1.31E-06	9.14E-07	3.62E-06	1.01E-05
	TOT	7.01E-06	8.00E-06	1.87E-05	8.67E-05	1.78E-05	-4.15E-05
13	WET	2.44E-05	2.84E-05	5.76E-05	-1.01E-04	3.44E-04	-4.10E-04
	BAS	3.59E-06	7.35E-06	2.76E-06	-2.50E-06	1.16E-04	-2.05E-04
	TOT	2.80E-05	3.57E-05	6.04E-05	-1.04E-04	4.61E-04	-6.15E-04
14	WET	6.84E-06	1.18E-05	9.51E-06	5.83E-05	2.83E-05	4.74E-06
	BAS	7.18E-06	4.17E-06	2.62E-06	1.83E-06	7.25E-06	2.02E-05
	TOT	1.40E-05	1.60E-05	1.21E-05	6.01E-05	3.55E-05	2.50E-05
15	WET	6.84E-06	1.18E-05	1.41E-05	4.25E-05	2.83E-05	4.74E-06
	BAS	7.18E-06	4.17E-06	2.62E-06	1.83E-06	7.25E-06	2.02E-05
	TOT	1.40E-05	1.60E-05	1.67E-05	4.44E-05	3.55E-05	2.50E-05
16	WET	6.84E-06	1.18E-05	7.22E-06	6.62E-05	2.83E-05	4.74E-06
	BAS	7.18E-06	4.17E-06	2.62E-06	1.83E-06	7.25E-06	2.02E-05
	TOT	1.40E-05	1.60E-05	9.84E-06	6.80E-05	3.55E-05	2.50E-05
17	WET	1.71E-05	2.96E-05	1.80E-05	3.34E-05	7.06E-05	8.31E-05
	BAS	1.79E-05	1.04E-05	6.55E-06	4.57E-06	1.81E-05	5.06E-05
	TOT	3.51E-05	4.00E-05	2.46E-05	3.80E-05	8.88E-05	1.34E-04
18	WET	6.84E-06	1.18E-05	7.22E-06	1.34E-05	2.83E-05	3.32E-05
	BAS	7.18E-06	4.17E-06	2.62E-06	1.83E-06	7.25E-06	2.02E-05
	TOT	1.40E-05	1.60E-05	9.84E-06	1.52E-05	3.55E-05	5.35E-05
19	WET	1.37E-05	2.68E-05	1.55E-05	2.60E-05	1.05E-04	1.66E-04
	BAS	1.44E-05	3.07E-06	3.80E-06	2.43E-06	-9.83E-05	2.12E-05
	TOT	2.80E-05	2.98E-05	1.93E-05	2.84E-05	7.09E-06	1.88E-04
20	WET	1.37E-05	2.37E-05	1.44E-05	2.67E-05	5.65E-05	6.64E-05
	BAS	1.44E-05	8.33E-06	5.24E-06	3.66E-06	1.45E-05	4.05E-05
	TOT	2.80E-05	3.20E-05	1.97E-05	3.04E-05	7.10E-05	1.07E-04
21	WET	1.37E-05	2.68E-05	1.55E-05	2.60E-05	1.05E-04	1.66E-04
	BAS	1.44E-05	3.07E-06	3.80E-06	2.43E-06	-9.83E-05	2.12E-05
	TOT	2.80E-05	2.98E-05	1.93E-05	2.84E-05	7.09E-06	1.88E-04
22	WET	3.42E-06	5.92E-06	3.61E-06	6.68E-06	1.41E-05	1.66E-05
	BAS	3.59E-06	2.08E-06	1.31E-06	9.14E-07	3.62E-06	1.01E-05
	TOT	7.01E-06	8.00E-06	4.92E-06	7.60E-06	1.78E-05	2.67E-05
23	WET	3.42E-06	5.92E-06	3.61E-06	6.68E-06	1.41E-05	1.66E-05
	BAS	3.59E-06	2.08E-06	1.31E-06	9.14E-07	3.62E-06	1.01E-05
	TOT	7.01E-06	8.00E-06	4.92E-06	7.60E-06	1.78E-05	2.67E-05
24	WET	1.71E-05	2.96E-05	1.80E-05	3.34E-05	7.06E-05	8.31E-05
	BAS	1.79E-05	1.04E-05	6.55E-06	4.57E-06	1.81E-05	5.06E-05
	TOT	3.51E-05	4.00E-05	2.46E-05	3.80E-05	8.88E-05	1.34E-04

25	WET	6.84E-06	1.18E-05	7.22E-06	1.34E-05	2.83E-05	3.32E-05
	BAS	7.18E-06	4.17E-06	2.62E-06	1.83E-06	7.25E-06	2.02E-05
	TOT	1.40E-05	1.60E-05	9.84E-06	1.52E-05	3.55E-05	5.35E-05
26	WET	2.70E-05	2.96E-05	1.80E-05	3.34E-05	-6.57E-05	8.31E-05
	BAS	1.79E-05	1.04E-05	6.55E-06	4.57E-06	1.81E-05	5.06E-05
	TOT	4.50E-05	4.00E-05	2.46E-05	3.80E-05	-4.76E-05	1.34E-04
27	WET	6.84E-05	1.18E-04	1.17E-04	-4.03E-04	1.64E-03	9.38E-04
	BAS	7.18E-05	4.17E-05	2.62E-05	1.83E-05	7.25E-05	2.02E-04
	TOT	1.40E-04	1.60E-04	1.44E-04	-3.85E-04	1.71E-03	1.14E-03
28	WET	1.71E-05	2.96E-05	1.80E-05	3.34E-05	7.06E-05	8.31E-05
	BAS	1.79E-05	1.04E-05	6.55E-06	4.57E-06	1.81E-05	5.06E-05
	TOT	3.51E-05	4.00E-05	2.46E-05	3.80E-05	8.88E-05	1.34E-04
29	WET	3.42E-06	5.92E-06	8.20E-06	-9.09E-06	1.41E-05	1.66E-05
	BAS	3.59E-06	2.08E-06	1.31E-06	9.14E-07	3.62E-06	1.01E-05
	TOT	7.01E-06	8.00E-06	9.51E-06	-8.17E-06	1.78E-05	2.67E-05
30	WET	5.67E-05	2.96E-05	1.80E-05	3.34E-05	-4.75E-04	8.31E-05
	BAS	1.79E-05	1.04E-05	6.55E-06	4.57E-06	1.81E-05	5.06E-05
	TOT	7.46E-05	4.00E-05	2.46E-05	3.80E-05	-4.57E-04	1.34E-04
31	WET	1.71E-04	2.96E-04	1.80E-04	3.34E-04	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	2.46E-04	3.80E-04	8.88E-04	1.34E-03
32	WET	3.42E-04	5.92E-04	0.00E+00	0.00E+00	1.13E-02	2.22E-02
	BAS	3.59E-04	2.08E-04	1.78E-04	-7.02E-05	3.62E-04	1.01E-03
	TOT	7.01E-04	8.00E-04	1.78E-04	-7.02E-05	1.17E-02	2.32E-02
33	WET	6.84E-04	1.18E-03	7.22E-04	1.34E-03	2.83E-03	3.32E-03
	BAS	7.18E-04	4.17E-04	2.62E-04	1.83E-04	7.25E-04	2.02E-03
	TOT	1.40E-03	1.60E-03	9.84E-04	1.52E-03	3.55E-03	5.35E-03
34	WET	3.42E-04	5.92E-04	3.61E-04	6.68E-04	1.41E-03	1.66E-03
	BAS	3.59E-04	2.08E-04	1.31E-04	9.14E-05	3.62E-04	1.01E-03
	TOT	7.01E-04	8.00E-04	4.92E-04	7.60E-04	1.78E-03	2.67E-03
35	WET	3.42E-04	5.92E-04	3.61E-04	6.68E-04	1.41E-03	1.66E-03
	BAS	3.59E-04	2.08E-04	1.31E-04	9.14E-05	3.62E-04	1.01E-03
	TOT	7.01E-04	8.00E-04	4.92E-04	7.60E-04	1.78E-03	2.67E-03
36	WET	3.42E-04	5.92E-04	3.61E-04	6.68E-04	5.25E-03	-4.19E-03
	BAS	3.59E-04	2.08E-04	1.31E-04	9.14E-05	3.62E-04	1.01E-03
	TOT	7.01E-04	8.00E-04	4.92E-04	7.60E-04	5.62E-03	-3.17E-03
37	WET	1.71E-04	2.96E-04	1.80E-04	3.34E-04	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	2.46E-04	3.80E-04	8.88E-04	1.34E-03
38	WET	3.42E-06	5.92E-06	3.61E-06	3.31E-05	1.41E-05	2.37E-06
	BAS	3.59E-06	2.08E-06	1.31E-06	9.14E-07	3.62E-06	1.01E-05
	TOT	7.01E-06	8.00E-06	4.92E-06	3.40E-05	1.78E-05	1.25E-05

39	WET	3.42E-04	5.92E-04	3.61E-04	6.68E-04	1.41E-03	1.66E-03
	BAS	3.59E-04	2.08E-04	1.31E-04	9.14E-05	3.62E-04	1.01E-03
	TOT	7.01E-04	8.00E-04	4.92E-04	7.60E-04	1.78E-03	2.67E-03
40	WET	1.71E-04	2.96E-04	1.80E-04	3.34E-04	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	2.46E-04	3.80E-04	8.88E-04	1.34E-03
41	WET	1.71E-04	2.96E-04	1.80E-04	3.34E-04	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	2.46E-04	3.80E-04	8.88E-04	1.34E-03
42	WET	1.71E-04	2.96E-04	1.80E-04	3.34E-04	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	2.46E-04	3.80E-04	8.88E-04	1.34E-03
43	WET	1.71E-04	2.96E-04	1.80E-04	3.34E-04	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	2.46E-04	3.80E-04	8.88E-04	1.34E-03
44	WET	1.71E-04	2.96E-04	7.89E-04	-1.76E-03	7.06E-04	8.31E-04
	BAS	1.79E-04	1.04E-04	6.55E-05	4.57E-05	1.81E-04	5.06E-04
	TOT	3.51E-04	4.00E-04	8.54E-04	-1.71E-03	8.88E-04	1.34E-03
45	WET	7.26E+00	7.51E+00	8.74E+00	5.33E+01	1.94E+01	1.22E+02
	BAS	3.10E+00	1.25E+00	1.84E+00	3.74E+00	2.17E+01	-5.62E+00
	TOT	1.04E+01	8.76E+00	1.06E+01	5.70E+01	4.10E+01	1.17E+02
46	WET	9.80E-01	1.77E-02	0.00E+00	1.52E-01	-1.36E+01	-1.28E-01
	BAS	4.02E-02	5.07E-02	9.75E-02	-3.07E-01	1.21E+00	1.73E+00
	TOT	1.02E+00	6.83E-02	9.75E-02	-1.55E-01	-1.24E+01	1.60E+00
48	WET	1.18E-01	1.90E-01	4.51E-02	8.00E-01	-1.25E+00	-1.36E+00
	BAS	2.04E-02	7.02E-03	1.75E-01	7.22E-01	7.29E-03	-7.53E-01
	TOT	1.39E-01	1.97E-01	2.20E-01	1.52E+00	-1.24E+00	-2.12E+00
49	WET	7.16E-01	8.08E-01	5.55E-01	2.64E+00	3.93E+00	1.21E+01
	BAS	6.99E-02	3.75E-02	2.54E-01	1.01E+00	1.86E-01	-8.64E-01
	TOT	7.85E-01	8.45E-01	8.09E-01	3.64E+00	4.12E+00	1.13E+01
50	WET	1.53E+03	3.02E+03	2.84E+02	1.91E+03	3.44E+03	5.35E+03
	BAS	1.29E+03	9.90E+02	1.21E+03	1.51E+03	-1.88E+02	9.58E+03
	TOT	2.82E+03	4.01E+03	1.50E+03	3.41E+03	3.25E+03	1.49E+04
51	WET	5.60E+02	5.96E+02	2.79E+02	4.86E+02	1.43E+03	-3.56E+03
	BAS	5.85E+01	4.61E+00	1.08E+01	1.49E+01	-1.76E+02	-4.26E+02
	TOT	6.19E+02	6.01E+02	2.90E+02	5.00E+02	1.26E+03	-3.99E+03

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY

SPRING RUNOFF SUBBASIN LOADINGS PER UNIT AREA - March 10 to April 28, 1983

PARM\SUBBASIN	10	8	11	5-11	7-10-8	3-7-5
52	6.35E+04	6.24E+04	7.32E+04	7.79E+04	7.30E+04	6.97E+04
1	5.15E-01	4.02E-02	6.02E-02	1.67E-01	-1.26E-01	4.03E-01
2	5.25E-01	3.81E-01	6.12E-01	1.94E+00	3.24E+00	-9.87E-01
3	1.39E+00	1.03E+00	2.11E+00	3.37E+00	-1.07E+00	5.50E+00
5	8.13E-01	5.55E-01	9.79E-01	1.37E+00	-1.31E+00	1.28E+00
6	7.26E-01	1.01E+00	4.48E+00	6.51E+00	3.04E+00	1.35E+01
7	1.65E+00	1.74E+00	6.40E+00	1.12E+01	6.70E+00	1.26E+01
8	1.74E+11	2.18E+11	5.47E+11	1.81E+13	-7.18E+11	5.08E+12
9	2.94E+11	4.85E+11	4.01E+11	4.77E+12	-6.30E+11	-2.79E+12
46	3.55E-01	4.45E-01	1.66E+00	-3.40E+00	2.13E+00	4.01E+01
48	1.41E+00	2.27E+00	2.35E+00	3.69E+00	7.17E+00	7.54E+01
49	2.25E+01	1.51E+01	1.92E+01	3.02E+01	-6.43E+01	1.25E+02
50	2.42E+04	2.53E+04	6.60E+04	5.95E+04	5.71E+04	5.79E+04
51	1.74E+04	9.53E+03	9.64E+03	9.31E+03	-7.21E+04	5.03E+04
53	2.76E+02	4.10E+02	2.33E+02	8.74E+01	-2.86E+02	6.32E+02
54	1.03E+10	1.00E+10	3.48E+10	4.72E+11	6.78E+09	3.69E+10
55	5.25E+10	8.09E+10	1.13E+11	1.52E+12	-8.59E+10	2.27E+11

In $\mu\text{g}/\text{km}^2$ for parameter 52 kg/km^2 for parameters 1-3, 5-7, 46, 48-51, and 53total counts/ km^2 for parameters 8, 9, 54, and 55

Table N-5

Recent Annual Loadings of Selected Parameters
to Lake Ontario from the Humber River

TORONTO AREA WATERSHED MANAGEMENT STRATEGY STUDY
ANNUAL TOTAL LOADINGS
FROM HUMBER RIVER TO LAKE ONTARIO

YEAR/PARM	FLOW m ³	LEAD kg	ZINC kg	FECAL COLIF Total Count	NH4 kg	TOTAL P kg	RSF kg	RSP kg
1972	1.86E+08	7.06E+03	1.06E+04	4.76E+15	2.15E+04	6.74E+04	8.32E+07	5.85E+07
1973	2.38E+08	9.55E+03	1.55E+04	6.43E+15	2.58E+04	9.95E+04	1.02E+08	8.33E+07
1974	1.96E+08	8.17E+03	1.28E+04	5.43E+15	2.32E+04	7.85E+04	8.65E+07	6.75E+07
1975	1.73E+08	6.74E+03	1.01E+04	4.58E+15	1.98E+04	6.23E+04	7.80E+07	5.41E+07
1976	2.07E+08	6.38E+03	9.13E+03	4.12E+15	2.26E+04	6.58E+04	9.27E+07	5.81E+07
1977	2.24E+08	8.03E+03	1.22E+04	6.37E+15	2.37E+04	8.13E+04	9.84E+07	6.71E+07
1978	2.43E+08	1.09E+04	1.83E+04	6.27E+15	2.99E+04	1.12E+05	1.04E+08	9.63E+07
1979	2.93E+08	1.23E+04	2.09E+04	7.93E+15	3.02E+04	1.34E+05	1.22E+08	1.11E+08
1980	2.03E+08	7.11E+03	1.05E+04	5.08E+15	2.30E+04	7.03E+04	9.04E+07	6.04E+07
1981	1.96E+08	7.59E+03	1.14E+04	5.25E+15	2.30E+04	7.09E+04	8.80E+07	6.15E+07
1982	3.09E+08	1.46E+04	2.52E+04	9.97E+15	3.51E+04	1.52E+05	1.29E+08	1.25E+08